



**The Big 4: Obesity, Tobacco Use, Physical
Inactivity, and Substance Abuse**
Tennessee Behavioral Risk Factor Surveillance System
2011-2017

Division of Population Health Assessment
Office of Population Health Surveillance

Galen Conti, MPH

Overview

- **Section I – Introduction to BRFSS and the Big 4**
- **Section II – Tennessee Demographics**
- **Section III – Obesity**
- **Section IV – Smoking**
- **Section V – Physical Inactivity**
- **Section VI – Substance Abuse (Binge Drinking)**
- **Section VII – Data Request and Contact Information**

Behavioral Risk Factor Surveillance System

BRFSS: The Behavioral Risk Factor Surveillance System

A Centers for Diseases Control and Prevention (CDC) supported surveillance system designed to assess behavioral risk factors and their association with chronic disease.

- **Person:**
Randomly sampled non-institutionalized adult individuals, aged 18+ years, residing in the state of Tennessee.
- **Place:**
Random-digit dialed phone numbers throughout the state of Tennessee.
- **Time:**
From 2011 to 2017 – a seven year time frame.

Introduction to the Big 4

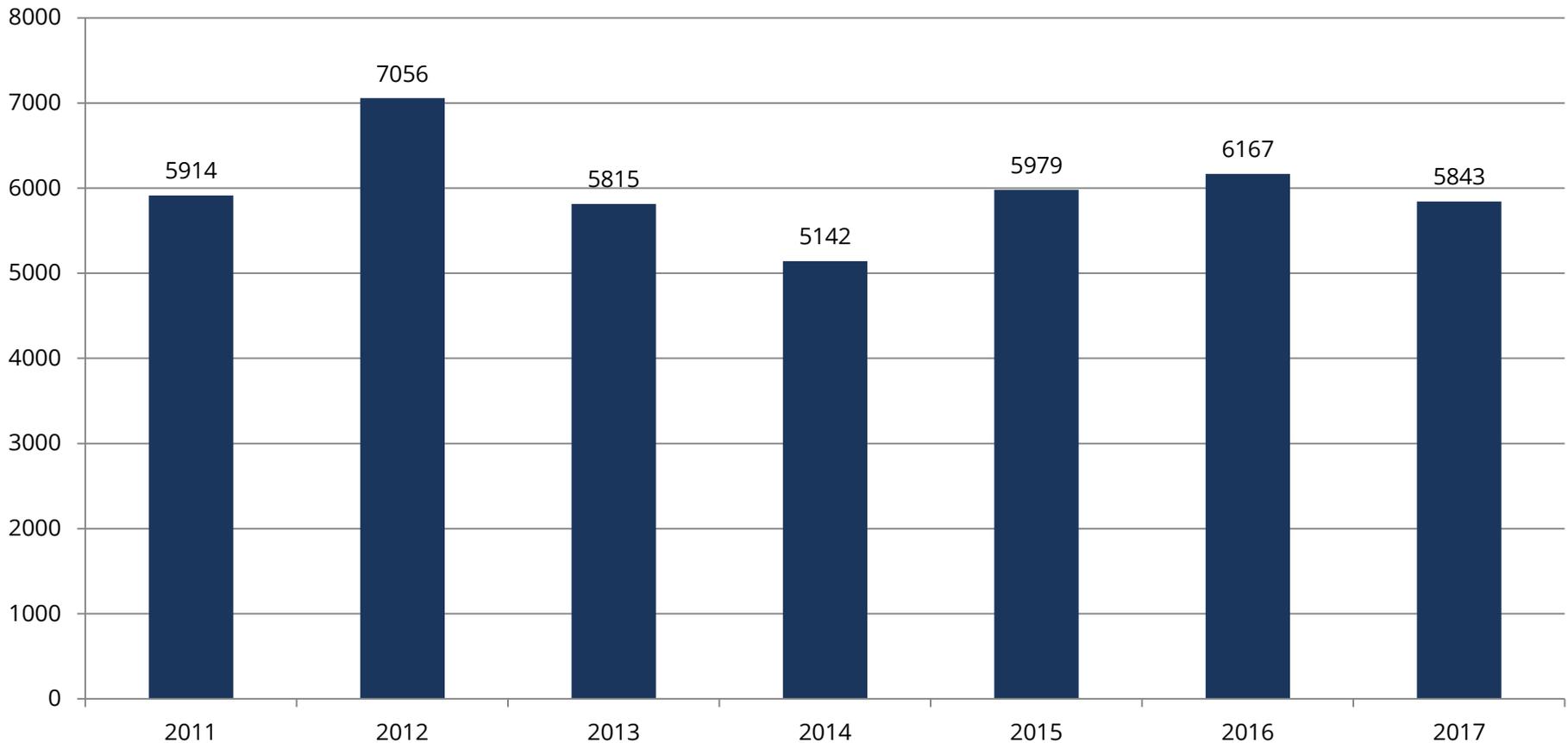
- **The Tennessee Department of Health's (TDH) mission is to "Protect, Promote, and Improve the health and prosperity of people in Tennessee".**
- **Focus on the "Big 4": obesity, tobacco use, physical inactivity, and substance abuse.**
- **These four risk factors are strongly associated with the leading causes of death in Tennessee and nationwide.**
- **The CDC includes obesity, tobacco use, and physical inactivity in their "Winnable Battles" list, which includes indicators whereby progress may be made in a short time frame.**

Introduction to the Big 4

- **Obesity** – Assessed using individual Body Mass Index (BMI) which was calculated using imputed BRFSS variables from self-reported height and weight. ‘Obese’ is a BMI of 30 or more .
- **Smoking** – Current smoker status is an imputed variable that includes respondents who answered that they have smoked at least 100 cigarettes in their lifetime and currently smoke some days or every day.
- **Physical Inactivity** - An imputed variable created from questions which ask the respondent if they have completed any physical activity or exercise within the past 30 days.
- **Substance abuse (Binge Drinking)** – An imputed variable that includes male respondents who answered that they have had five or more drinks on one occasion during the past month, and female respondents who answered that they have had four or more drinks on one occasion over the past month.

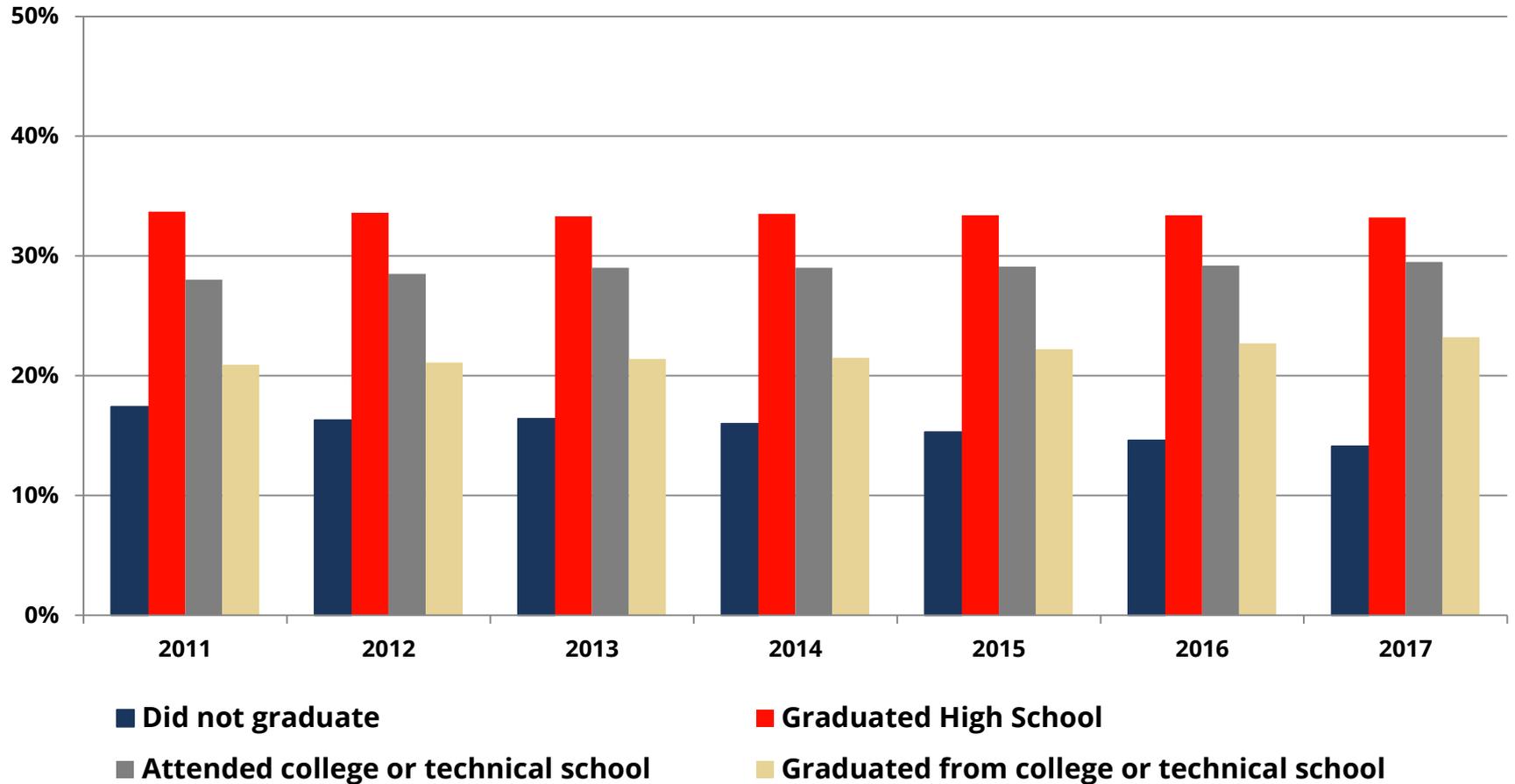
Tennessee BRFSS Sample Sizes

**Number of Respondents:
TN BRFSS, 2011 to 2017**



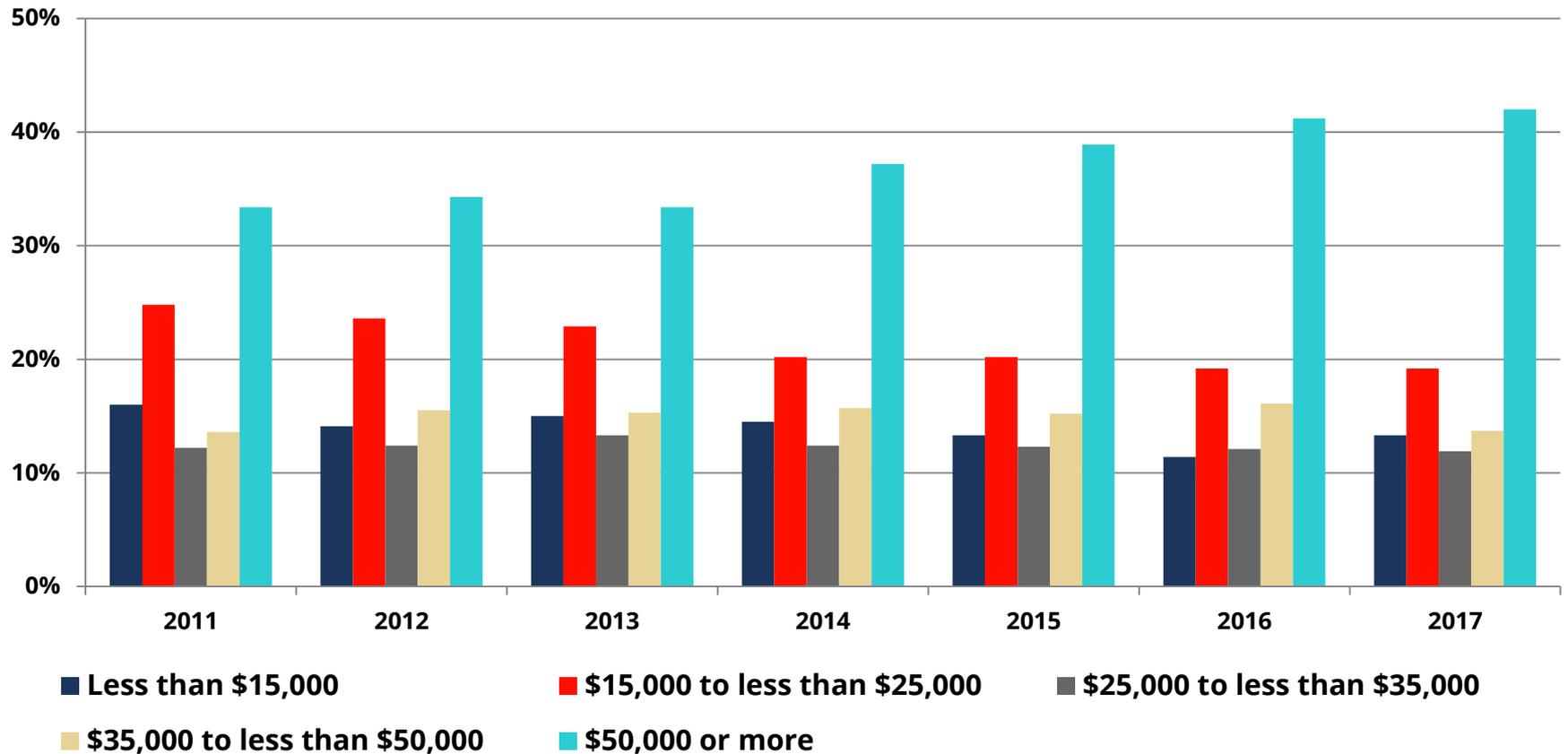
Education in Tennessee BRFSS

Education: TN BRFSS, 2011 to 2017



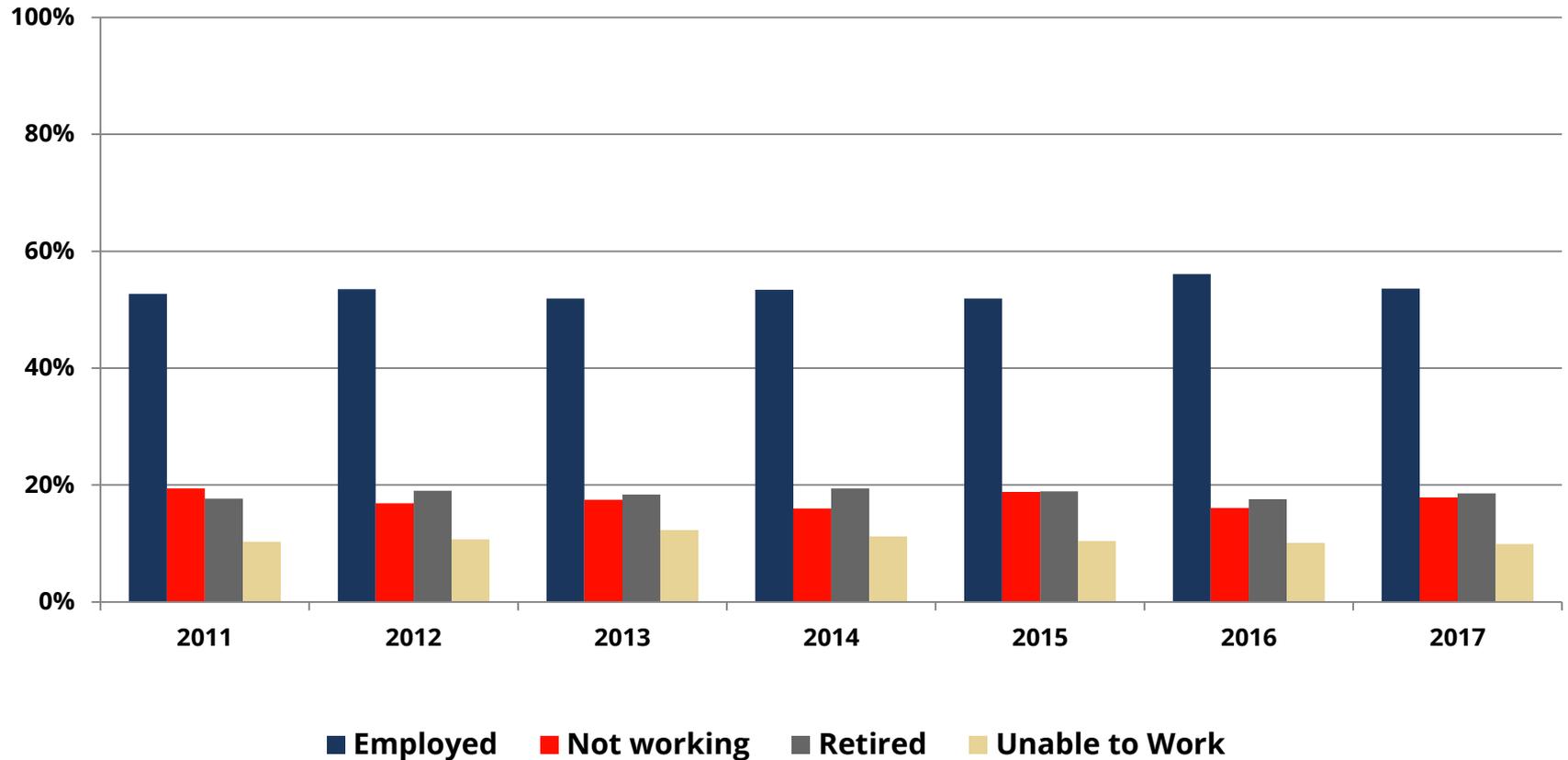
Household Income in Tennessee BRFSS

Income: TN BRFSS, 2011 to 2017



Employment in Tennessee BRFSS

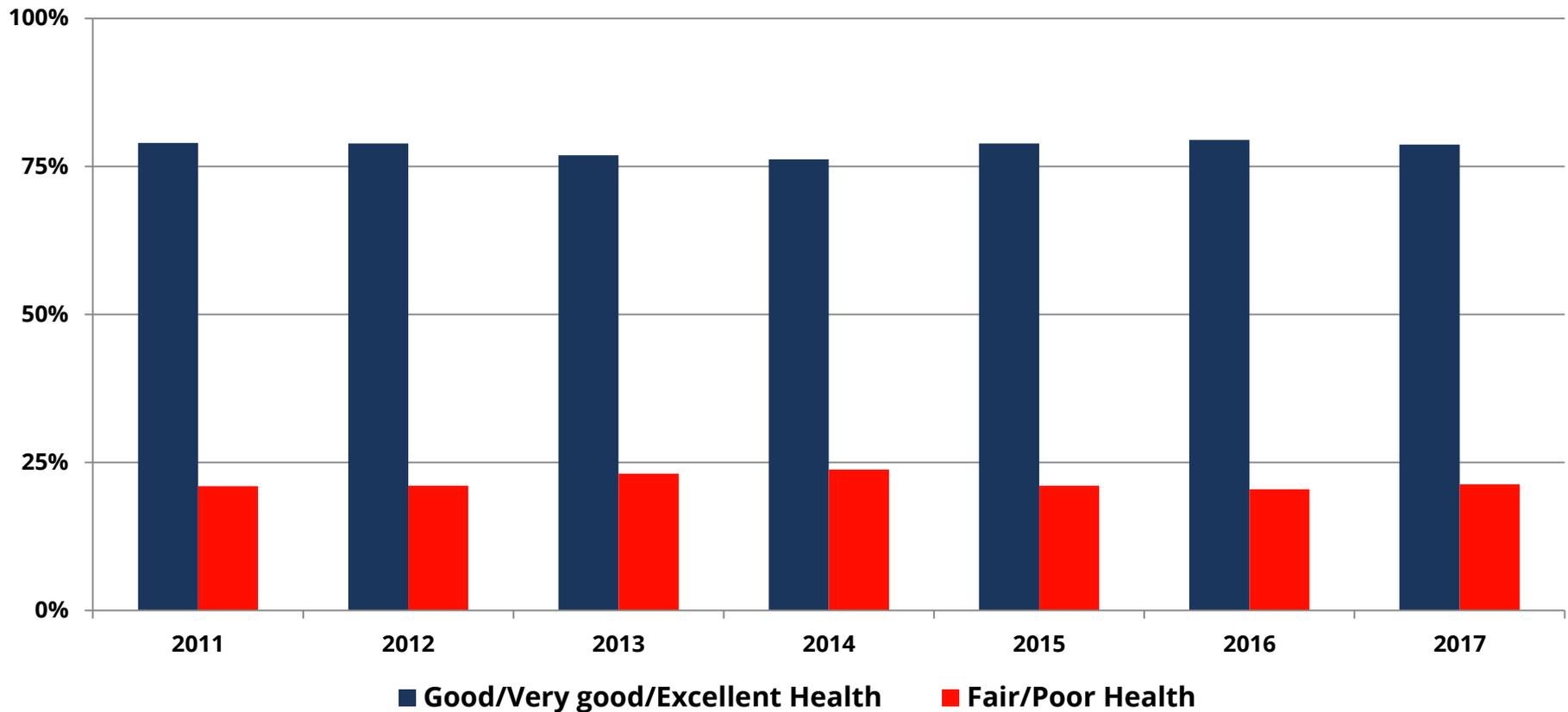
Employment: TN BRFSS, 2011 to 2017



*Respondents who answered that they were a student, homemaker, out of work for under a year, or out of work for over a year were classified as "Not working." "Employed" captured respondents who were employed for wages and self employed.

Health Status in Tennessee BRFSS

Reported Health Status: TN BRFSS, 2011 to 2017

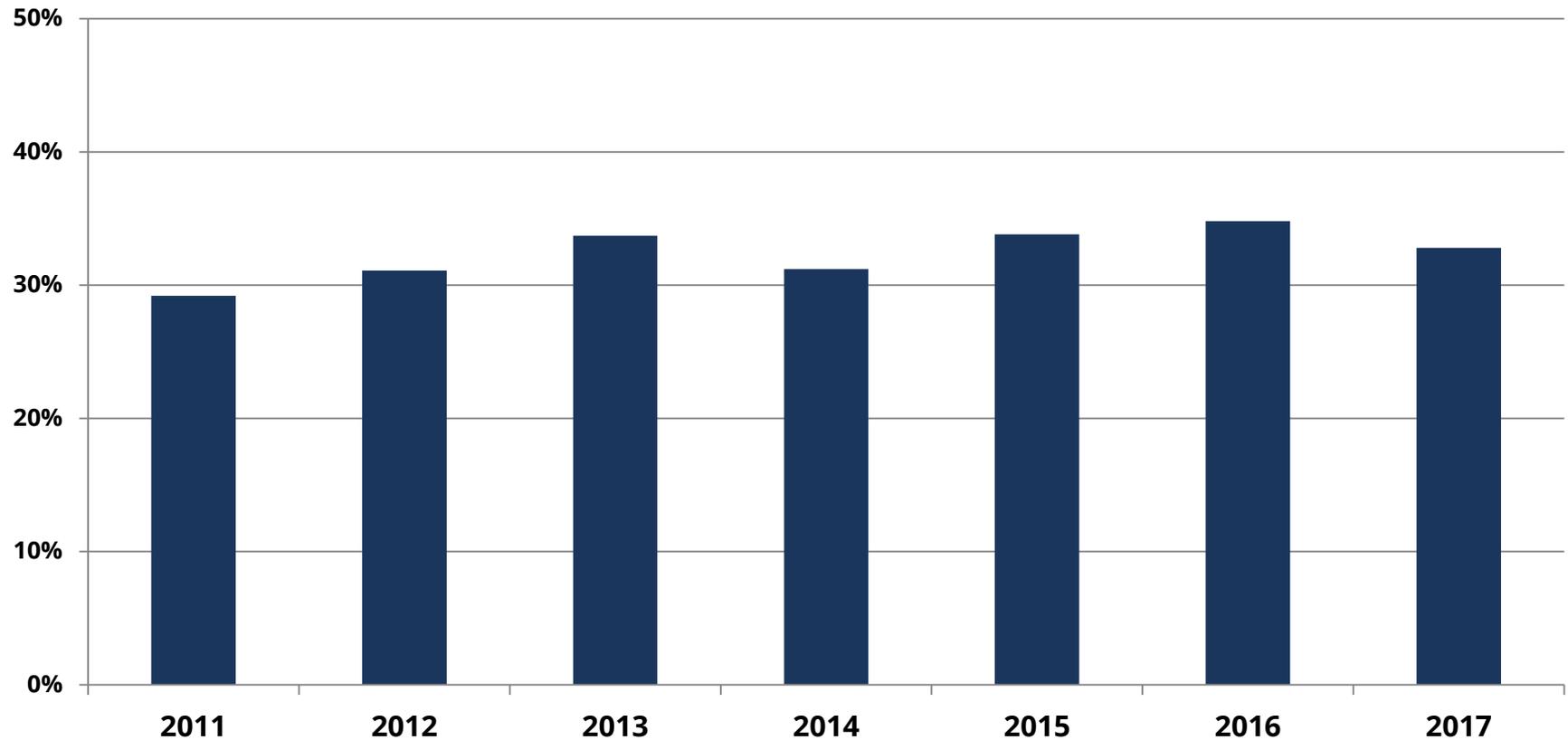


Tennessee Demographics Summary

- About 3 out of 4 adult Tennesseans reporting being White, non-Hispanic.
- The highest proportion of Tennesseans reported having a high school diploma as their highest level of education.
- At least 1 out of 3 Tennessean households reported making \$50,000/year or more.
- About half of Tennesseans reported being employed or self-employed.
- About 3 out of 4 Tennesseans reported having good, very good, or excellent health.

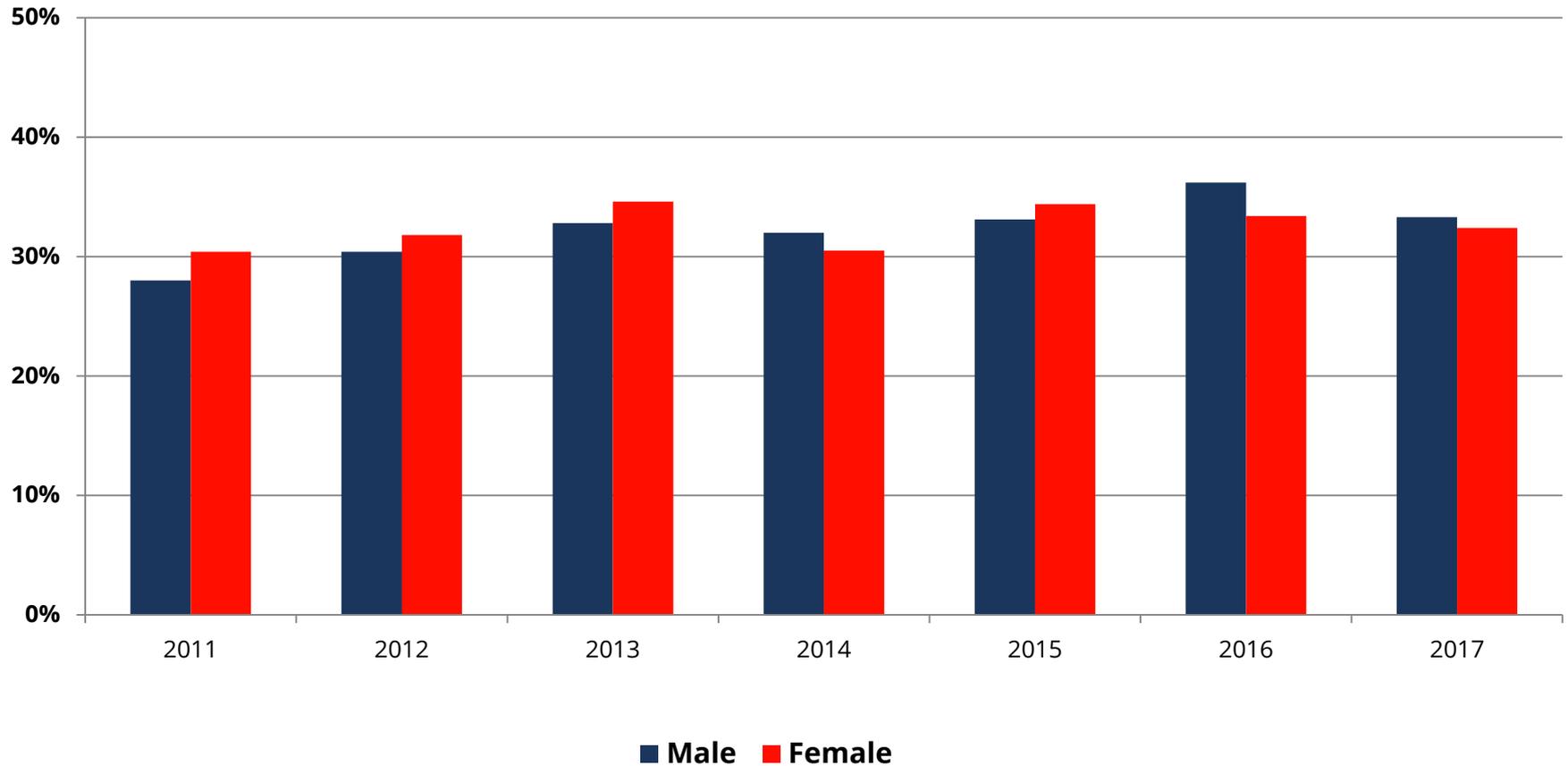
Tennessee BRFSS: Obesity

Obesity: TN BRFSS, 2011 to 2017



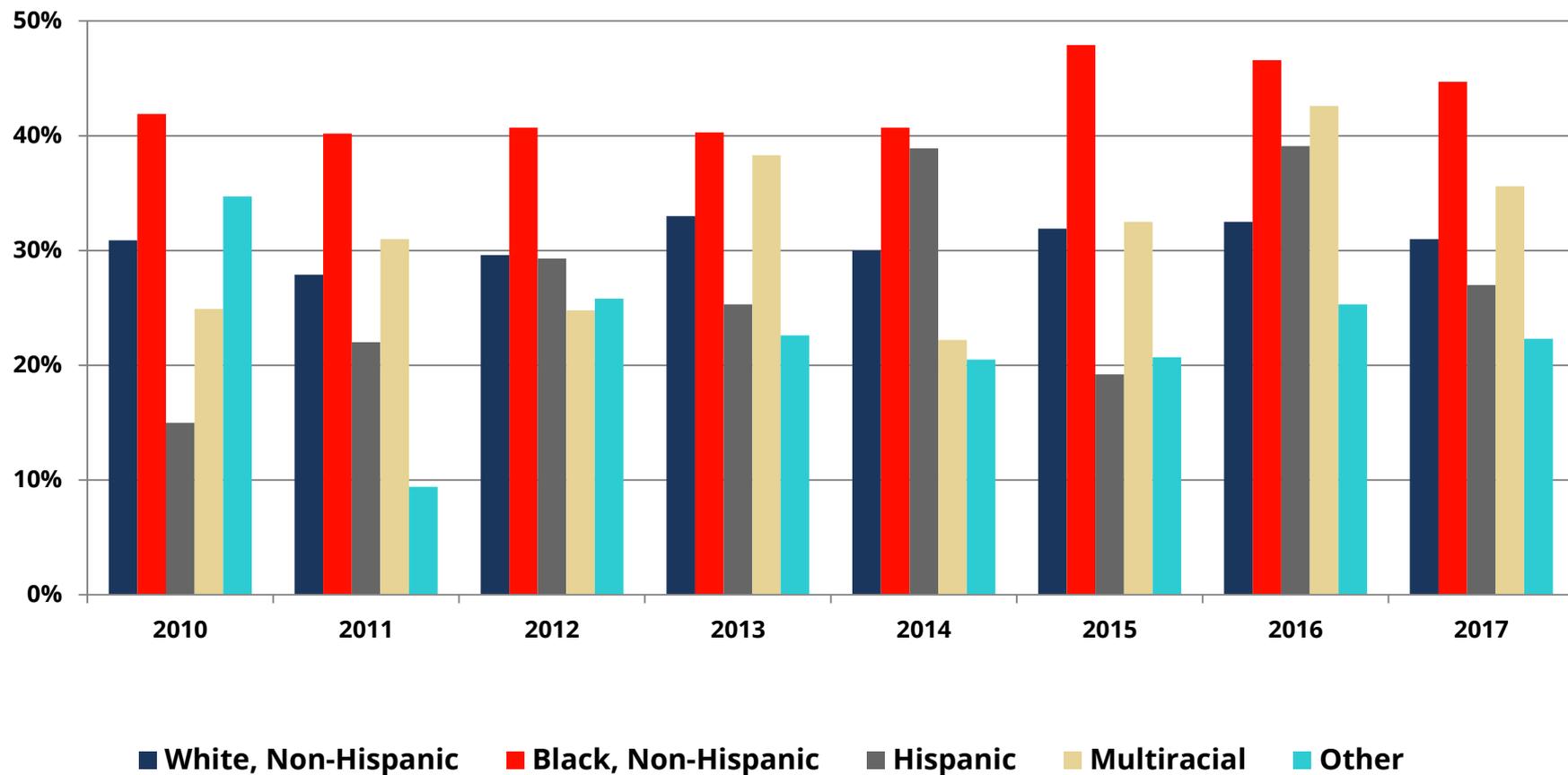
Tennessee BRFSS: Obesity

Obesity by Sex: TN BRFSS, 2011 to 2017



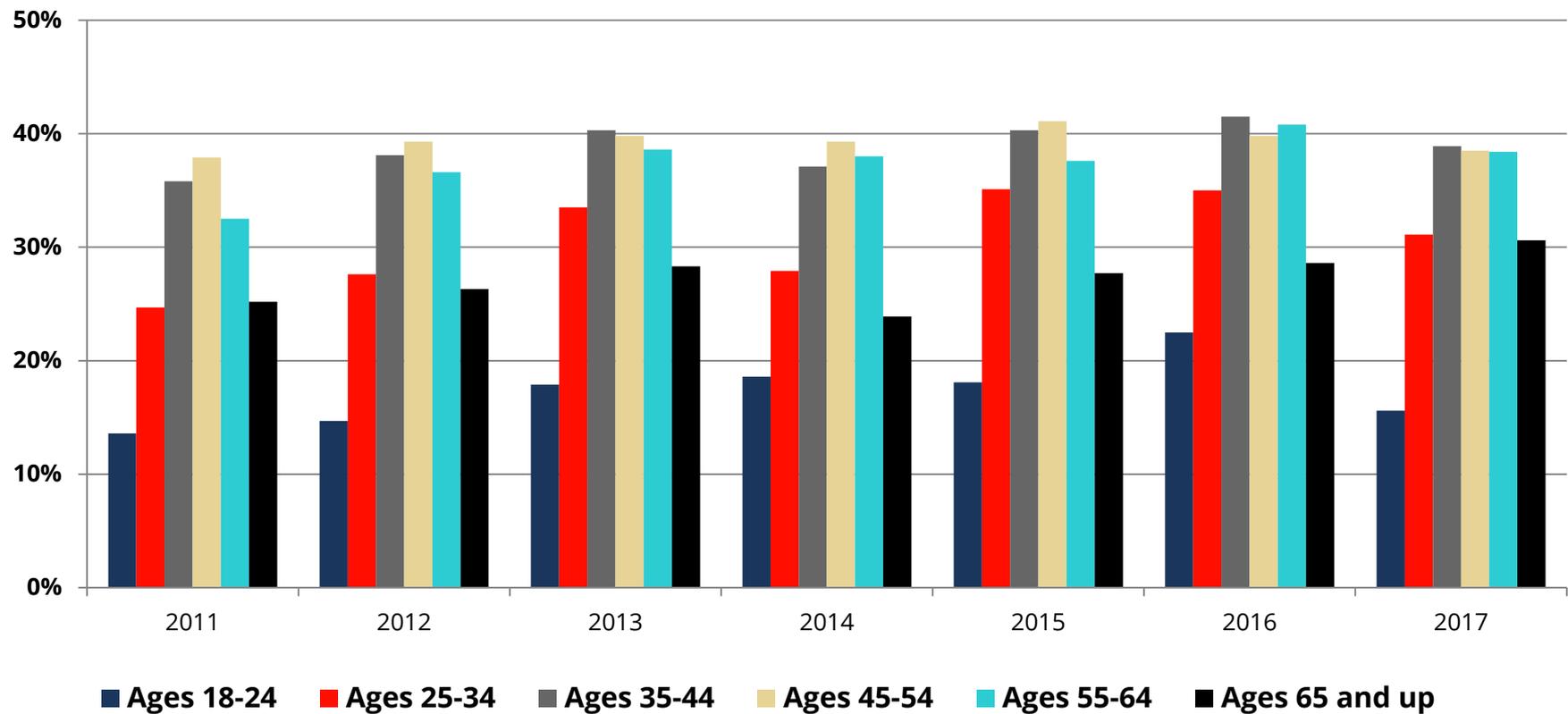
Tennessee BRFSS: Obesity

Obesity by Race: TN BRFSS, 2011 to 2017



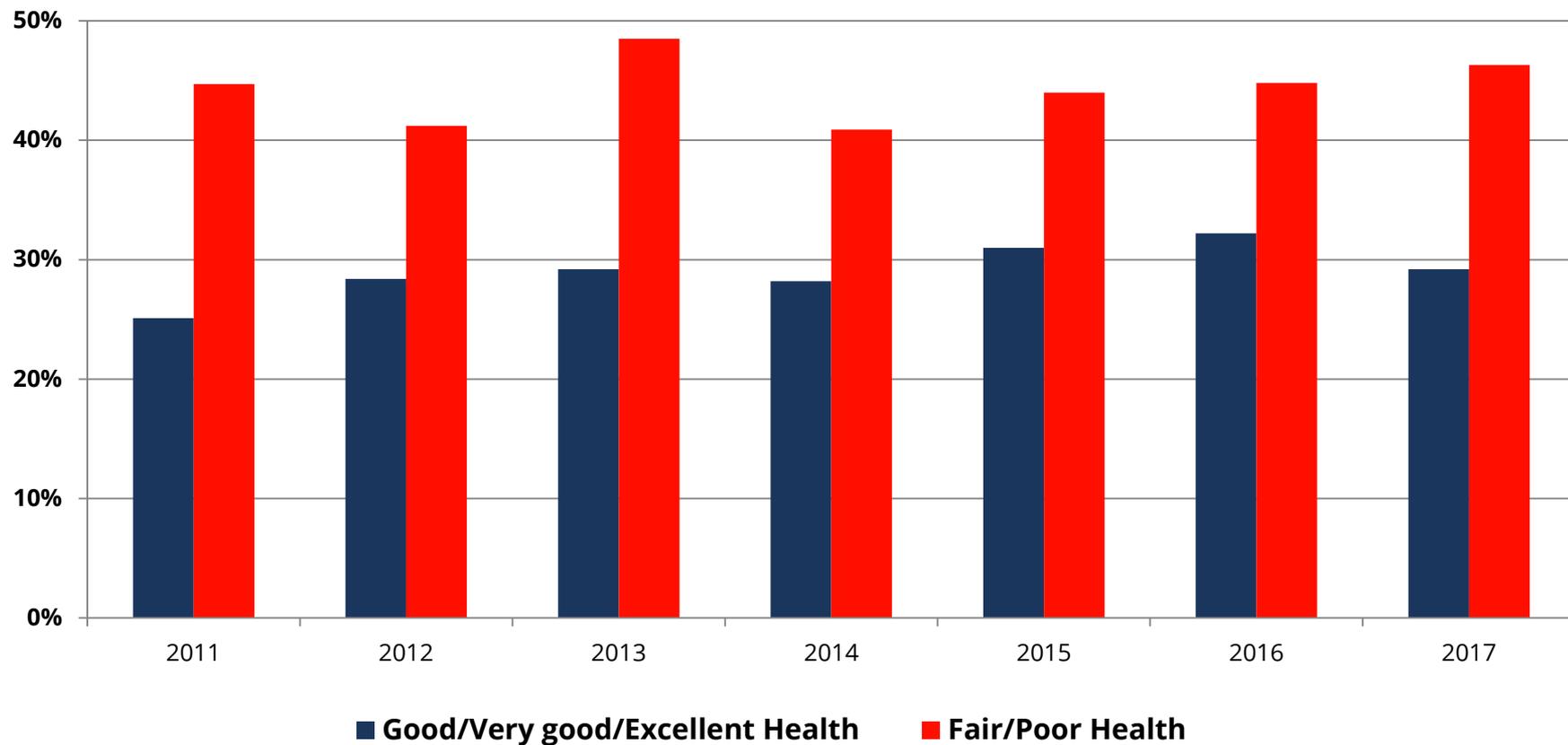
Tennessee BRFSS: Obesity

Obesity by Age Group: TN BRFSS, 2011 to 2017



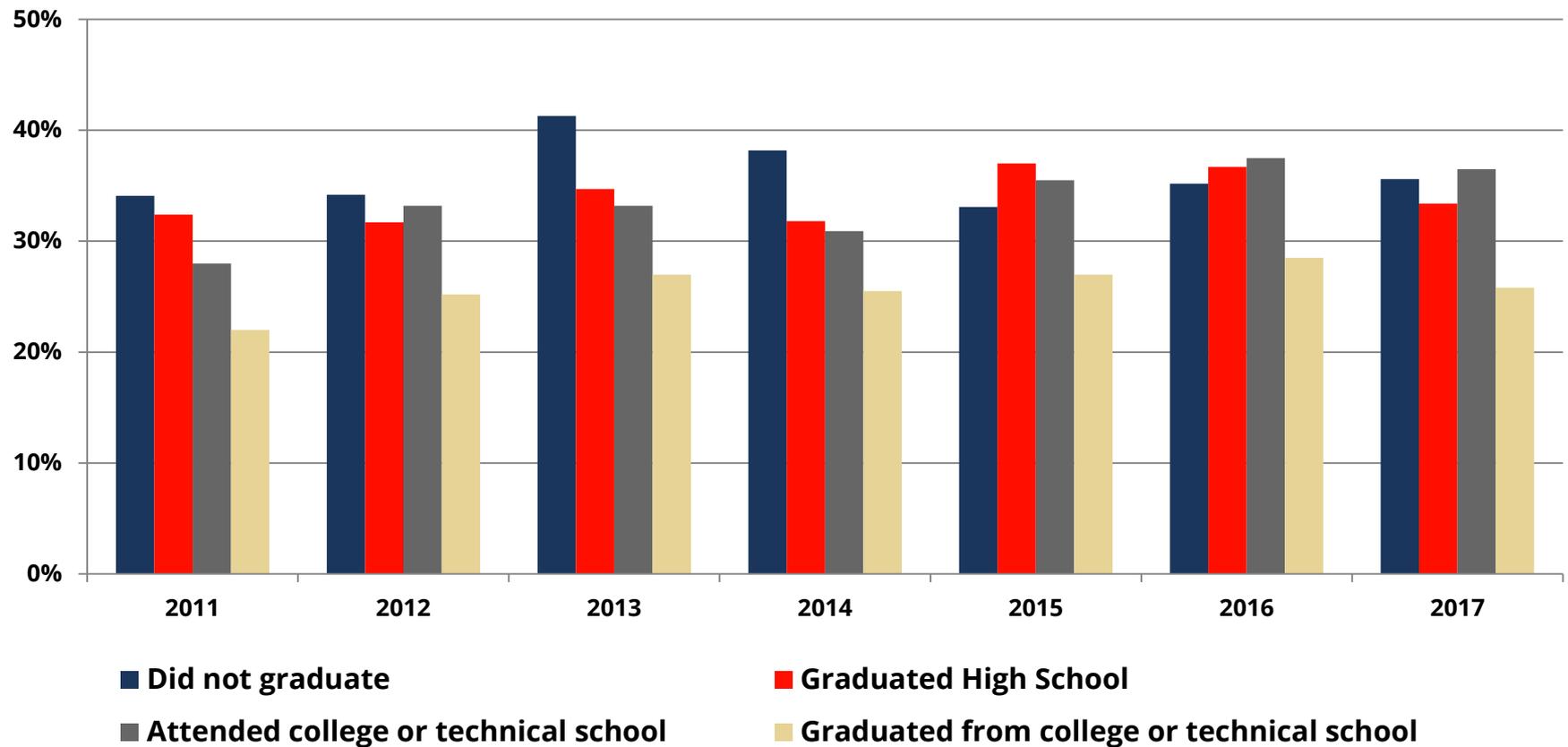
Tennessee BRFSS: Obesity

Obesity by Reported Health Status: TN BRFSS, 2011 to 2017



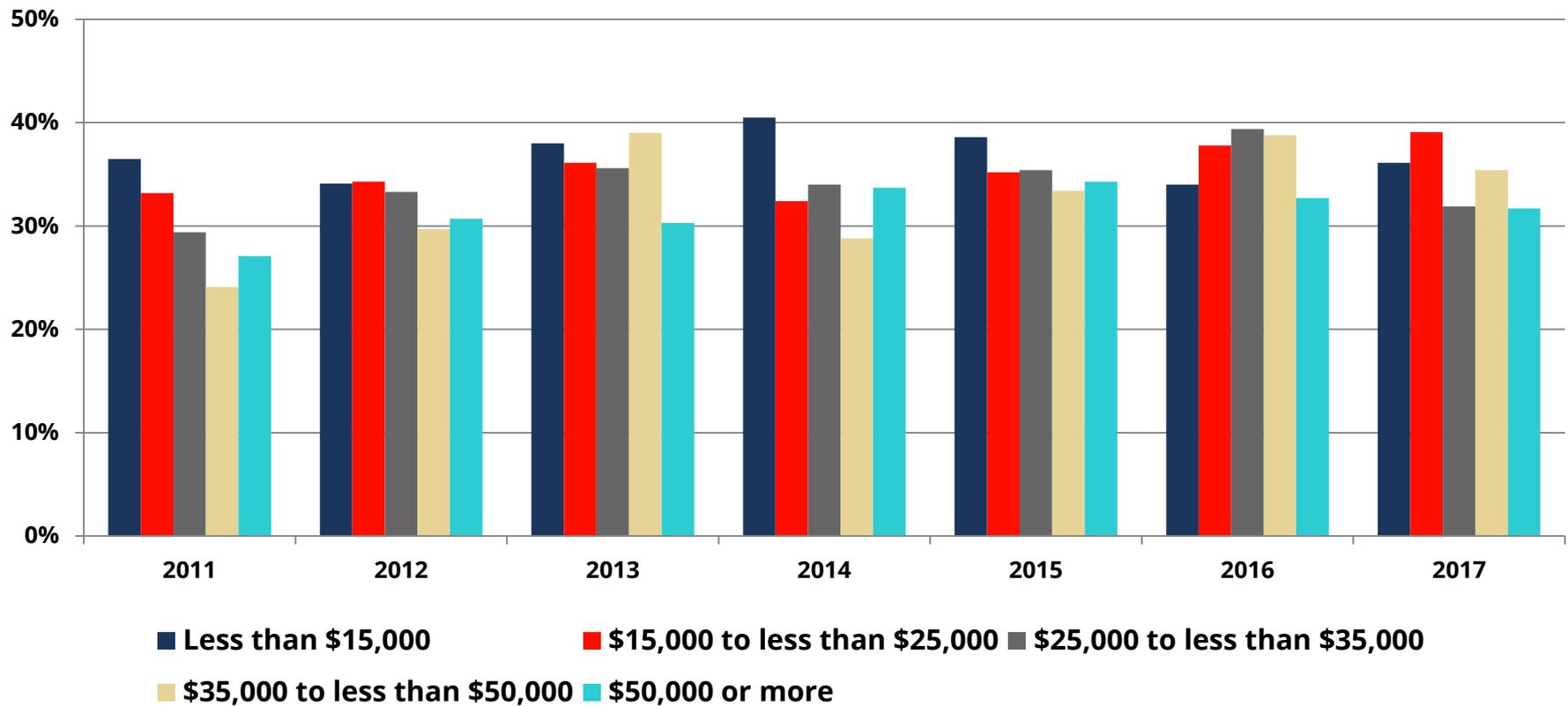
Tennessee BRFSS: Obesity

Obesity by Education: TN BRFSS, 2011 to 2017



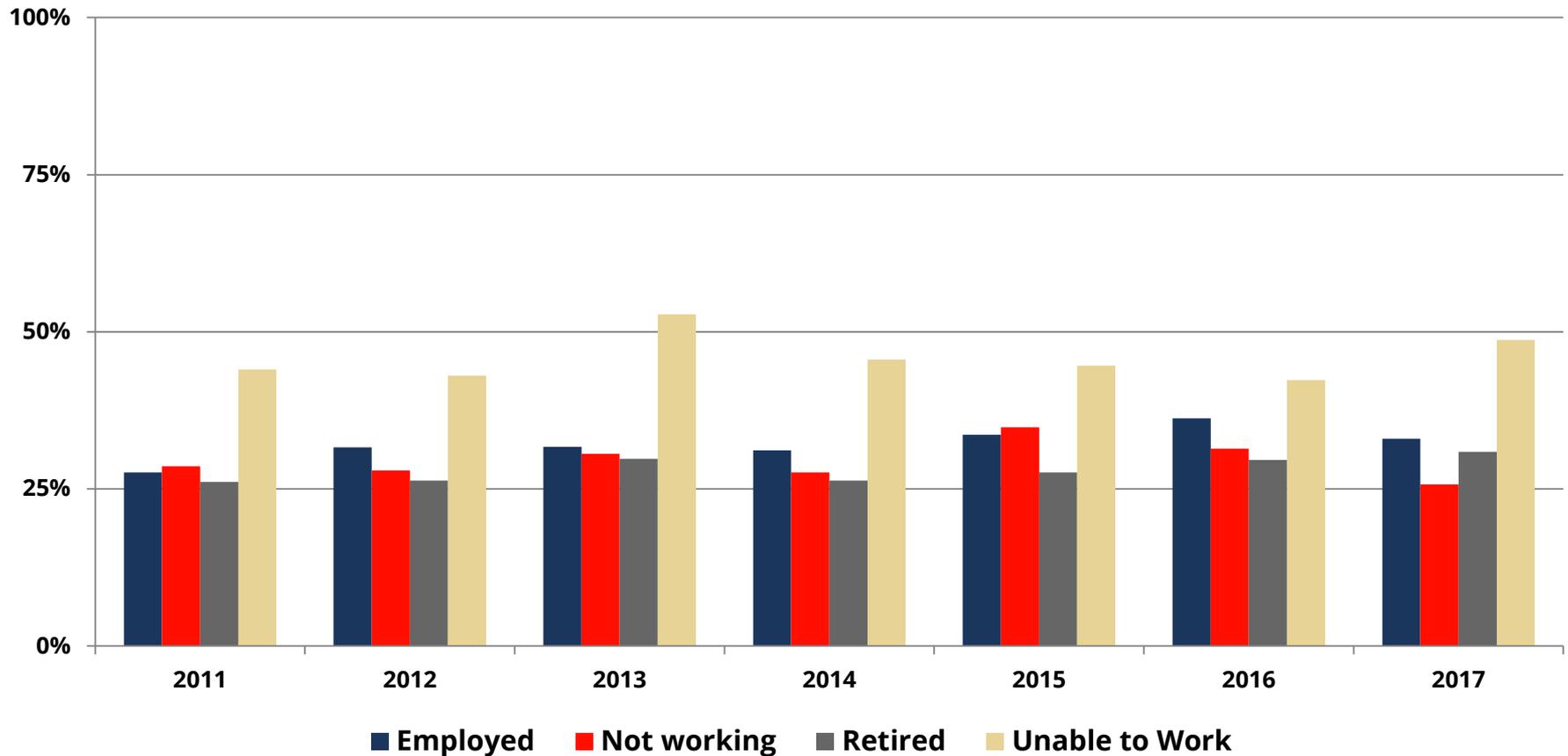
Tennessee BRFSS: Obesity

Obesity by Income: TN BRFSS, 2011 to 2017



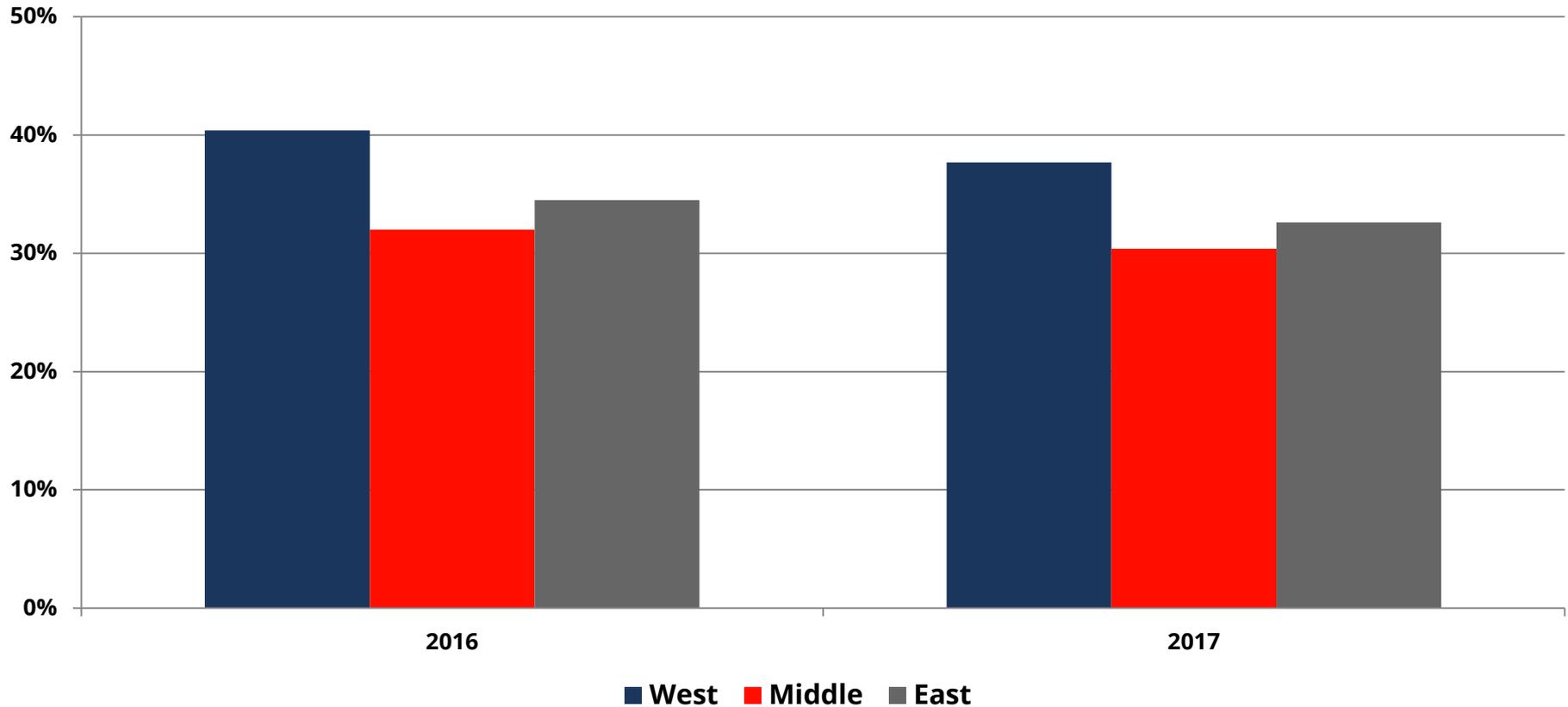
Tennessee BRFSS: Obesity

Obesity by Employment: TN BRFSS, 2011 to 2017



Tennessee BRFSS: Obesity

Obesity in Grand Divisions: TN BRFSS, 2016 to 2017

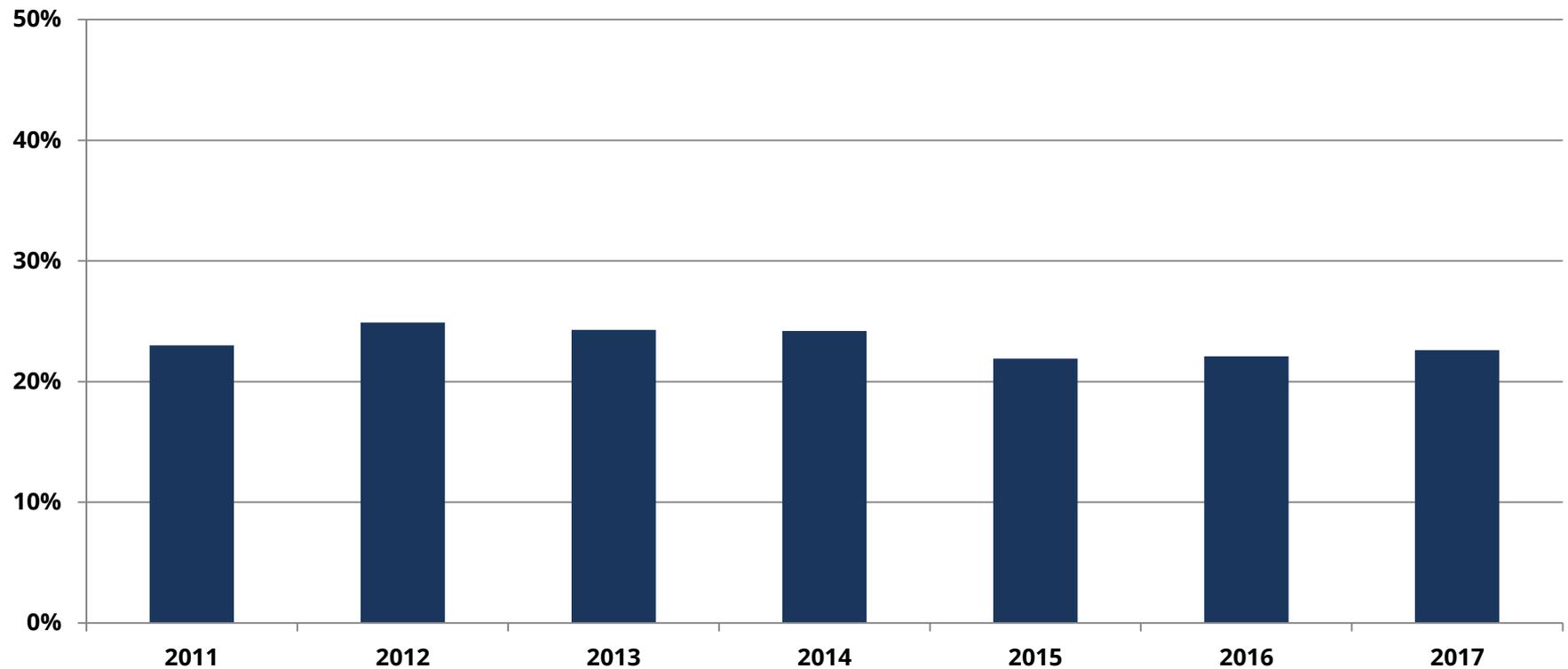


Tennessee BRFSS: Obesity Summary

- 1 out of 3 adult Tennesseans are obese.
- Middle aged adults (aged 35-64 years) had higher proportions of obesity.
- Respondents who reported having fair or poor health had much higher proportions of obesity than those with good health.
- Respondents with lower education generally had higher proportions of obesity.
- Respondents earning higher salaries had slightly lower proportions of obesity.
- Almost half of respondents who reported being unable to work were obese.
- Obesity was highest among Tennessee adults living in the West grand division, compared to Middle or East.

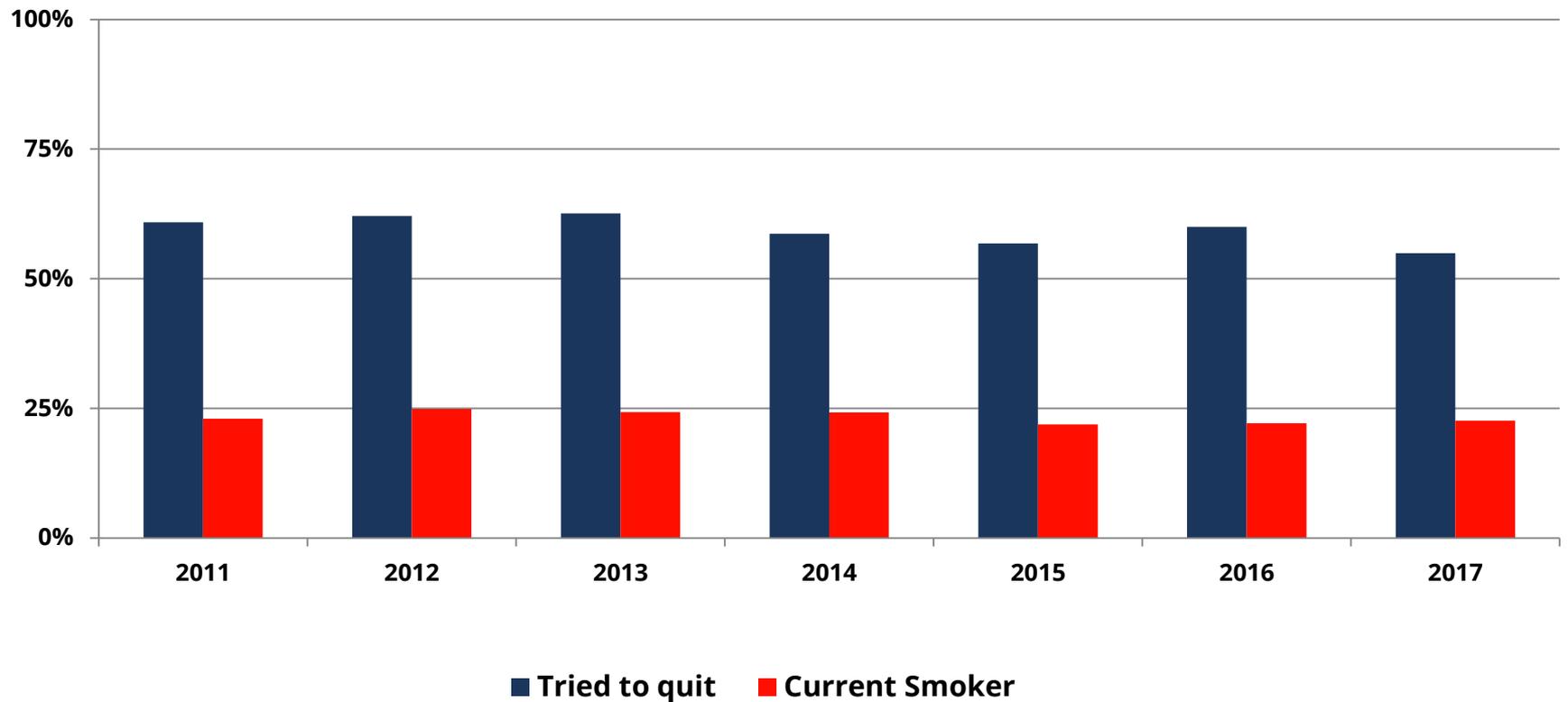
Tennessee BRFSS: Smoking

Smoking: TN BRFSS, 2011 to 2017



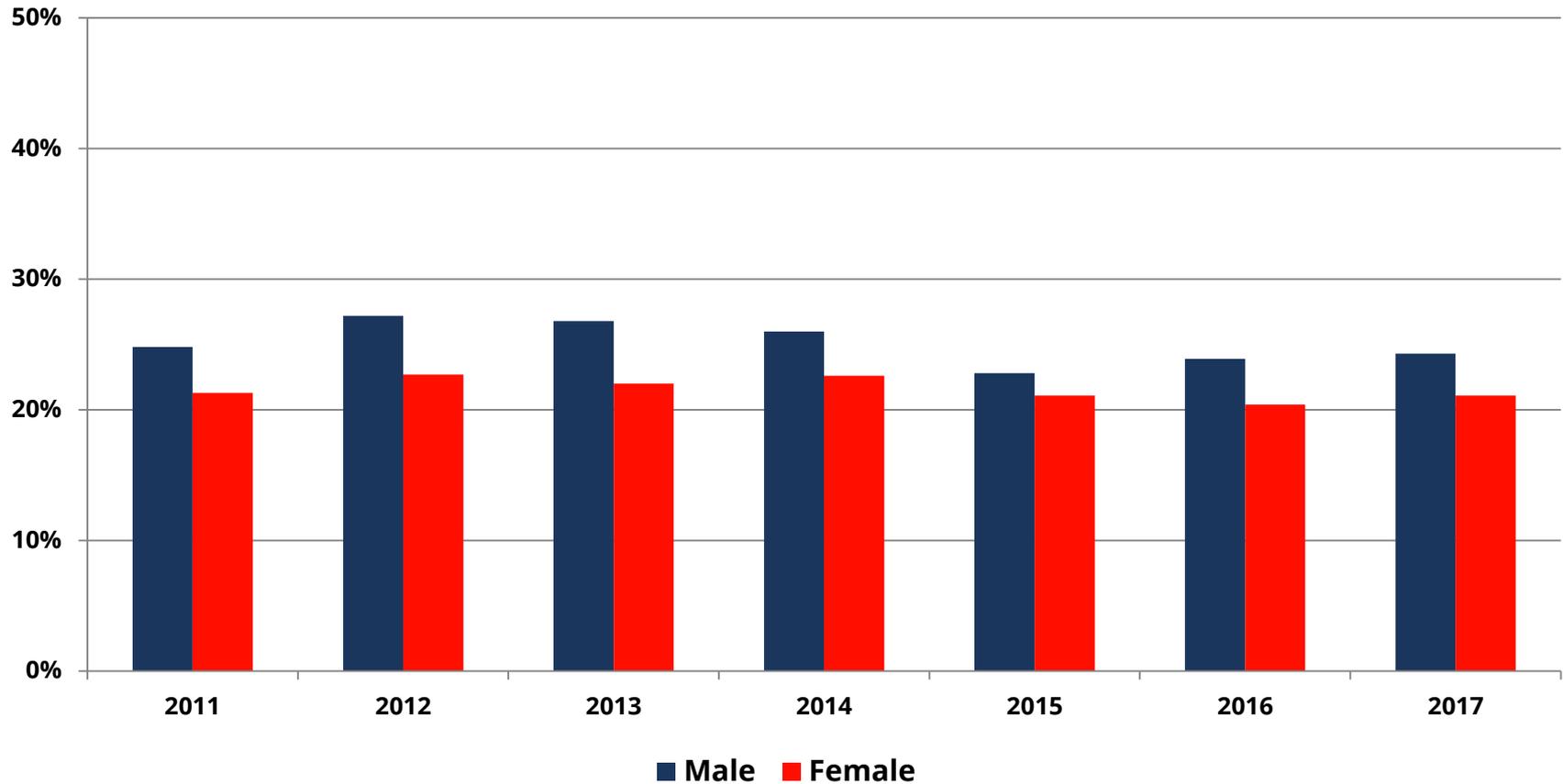
Tennessee BRFSS: Smoking

Smoking by Individuals who have tried to quit: TN BRFSS, 2011 to 2017



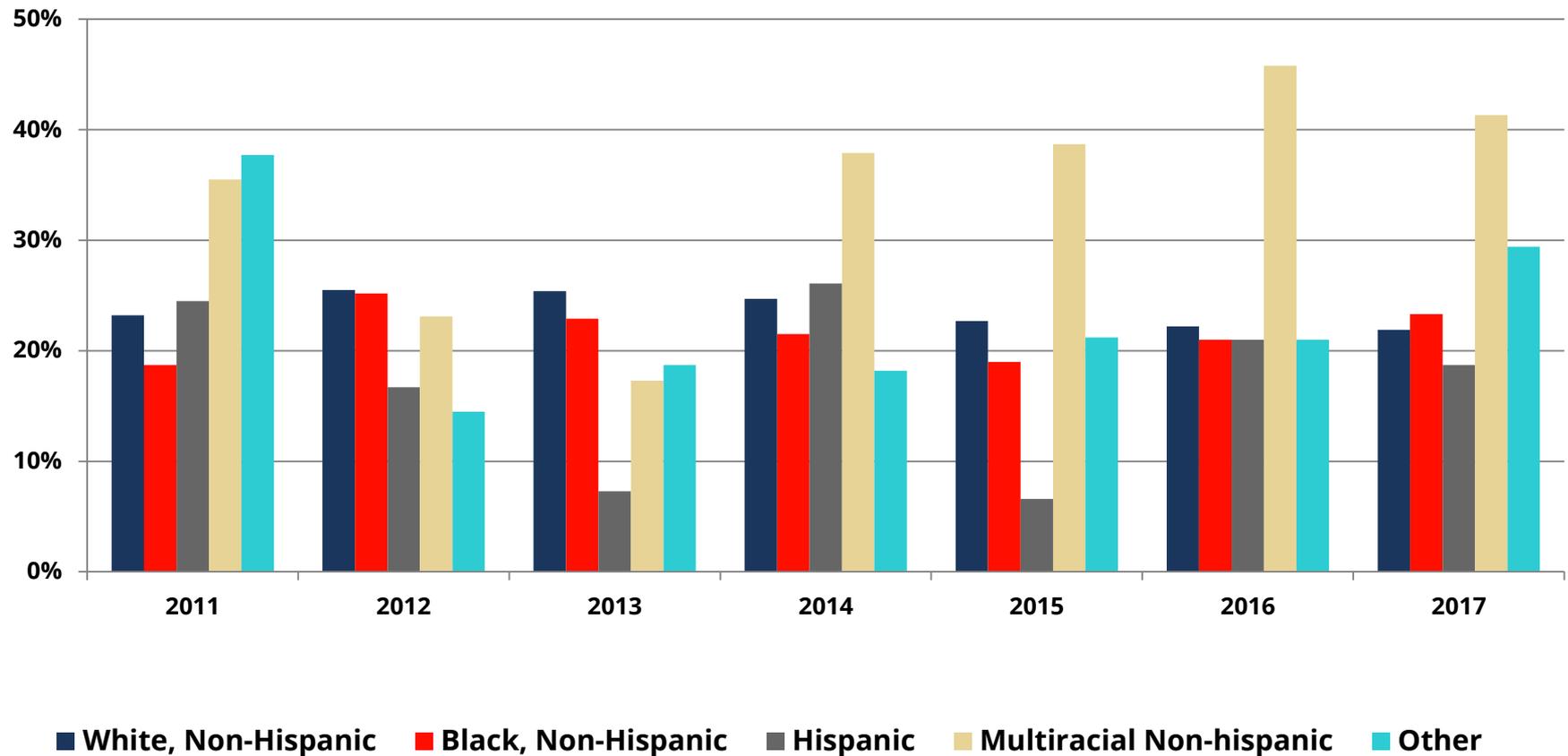
Tennessee BRFSS: Smoking

Smoking by Sex: TN BRFSS, 2011 to 2017



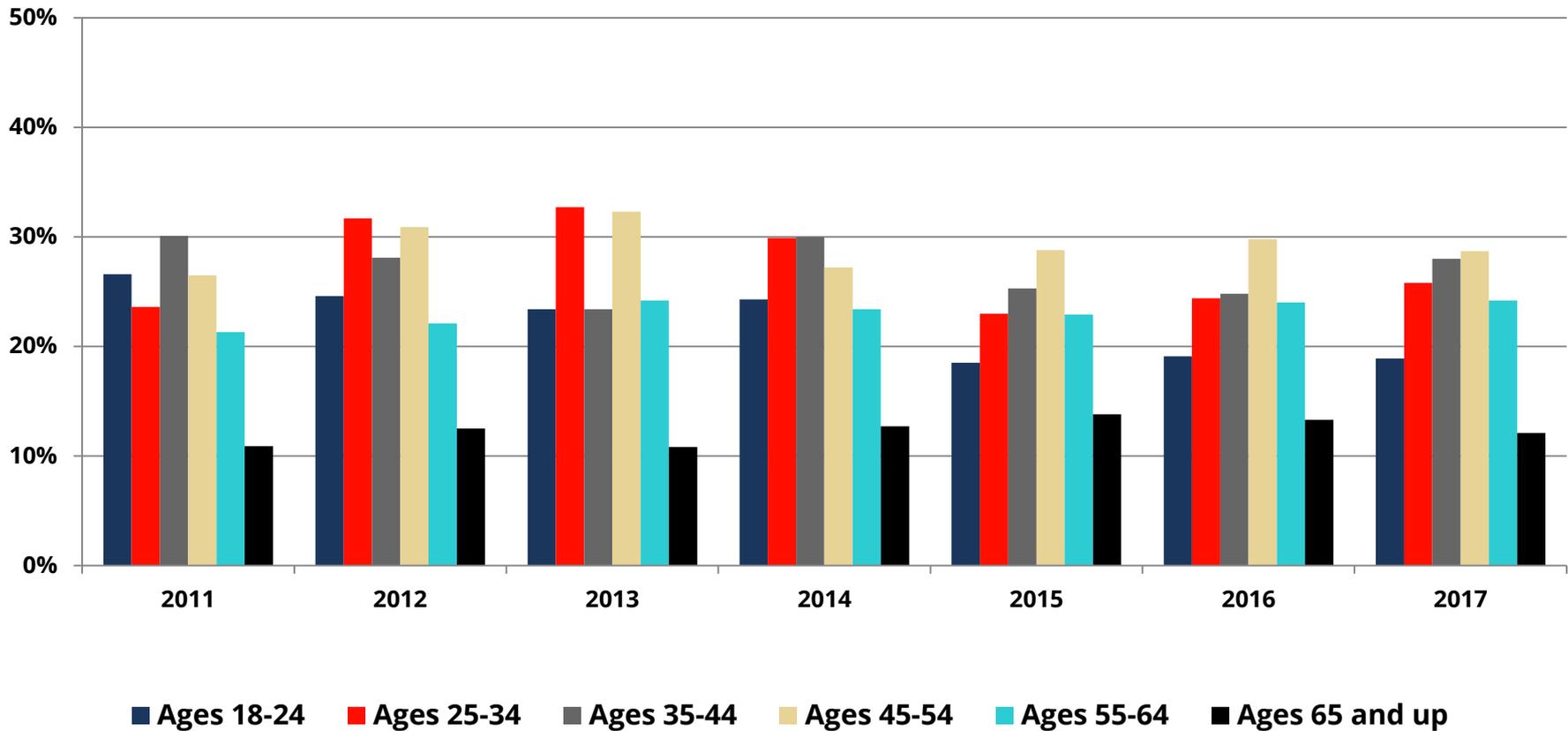
Tennessee BRFSS: Smoking

Smoking by Race: TN BRFSS, 2011 to 2017



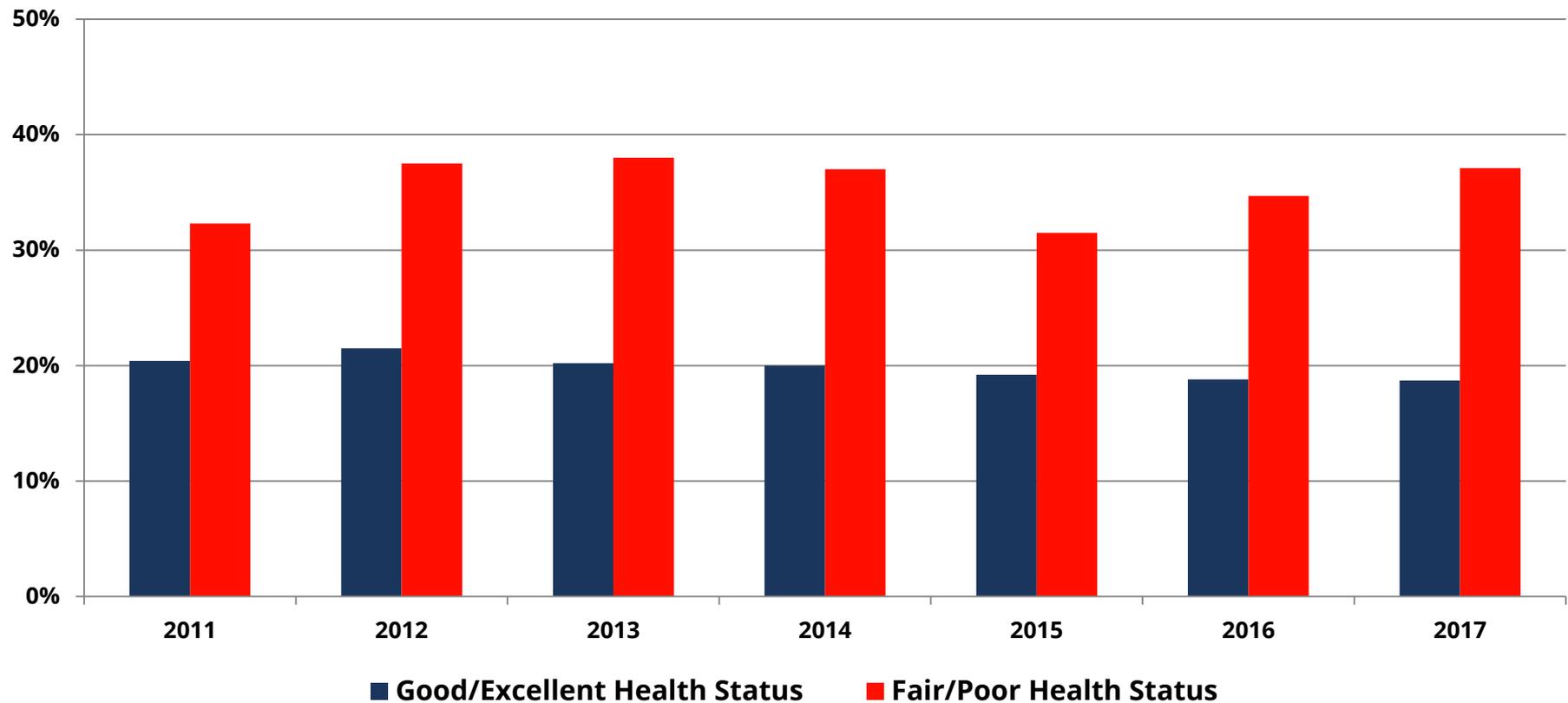
Tennessee BRFSS: Smoking

Smoking by Age Group: TN BRFSS, 2011 to 2017



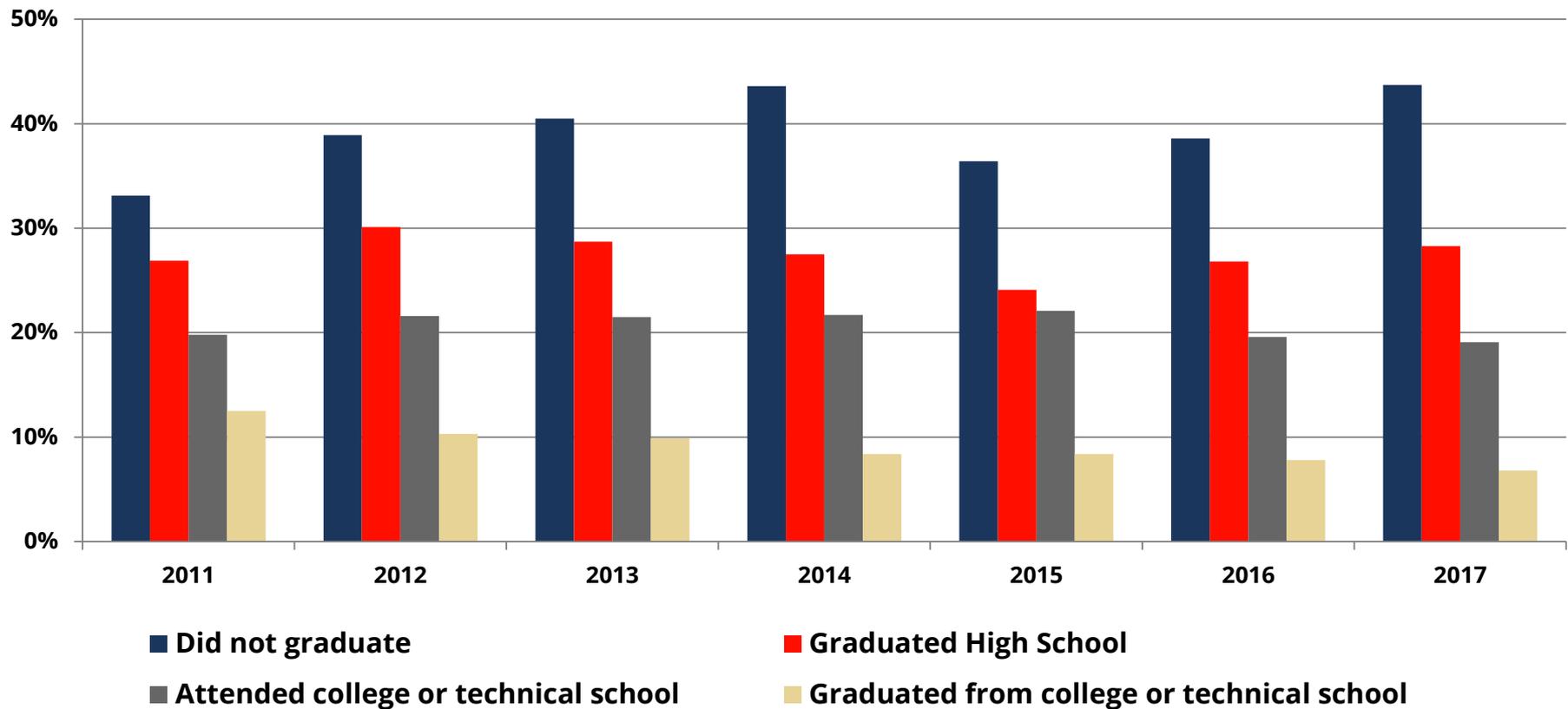
Tennessee BRFSS: Smoking

Smoking by Reported Health Status: TN BRFSS, 2011 to 2017



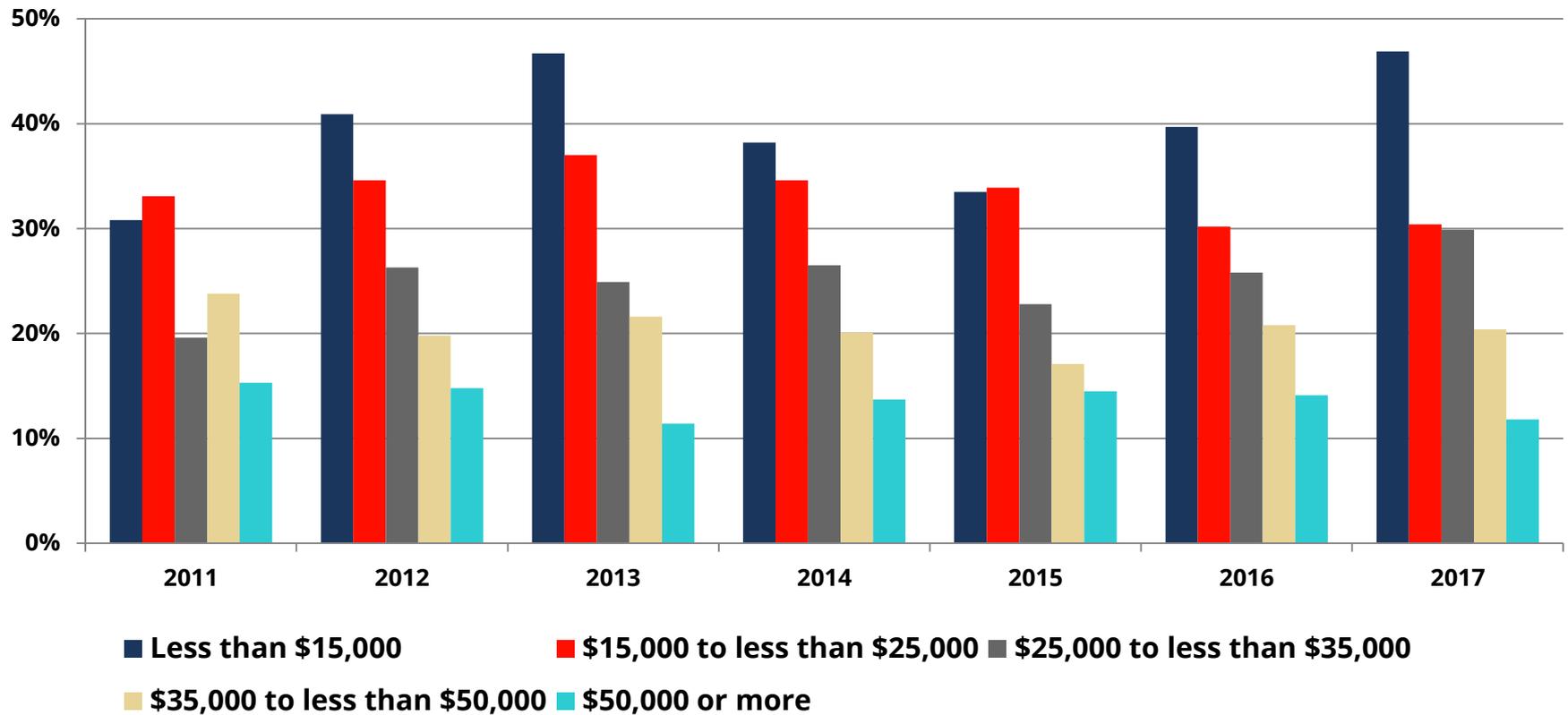
Tennessee BRFSS: Smoking

Smoking by Education: TN BRFSS, 2011 to 2017



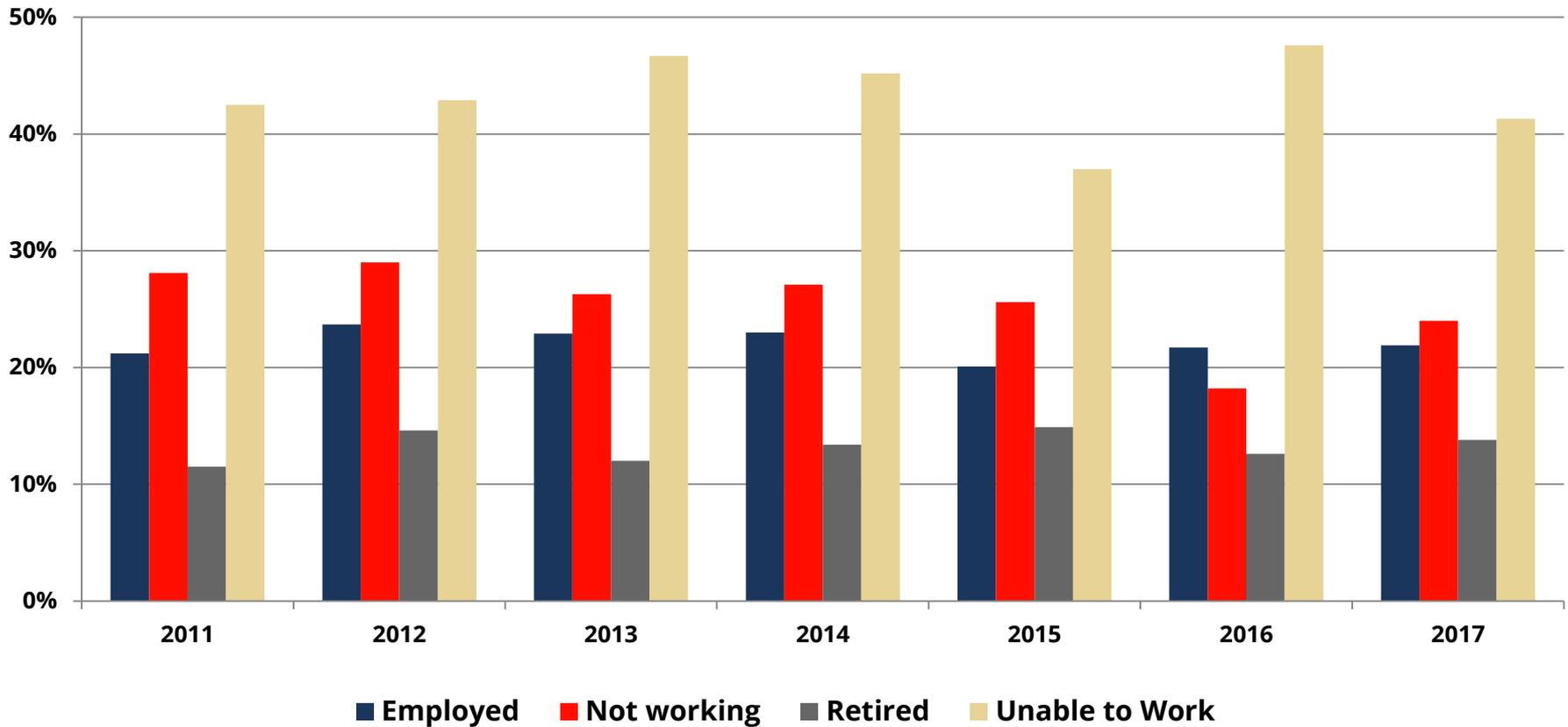
Tennessee BRFSS: Smoking

Smoking by Income: TN BRFSS, 2011 to 2017



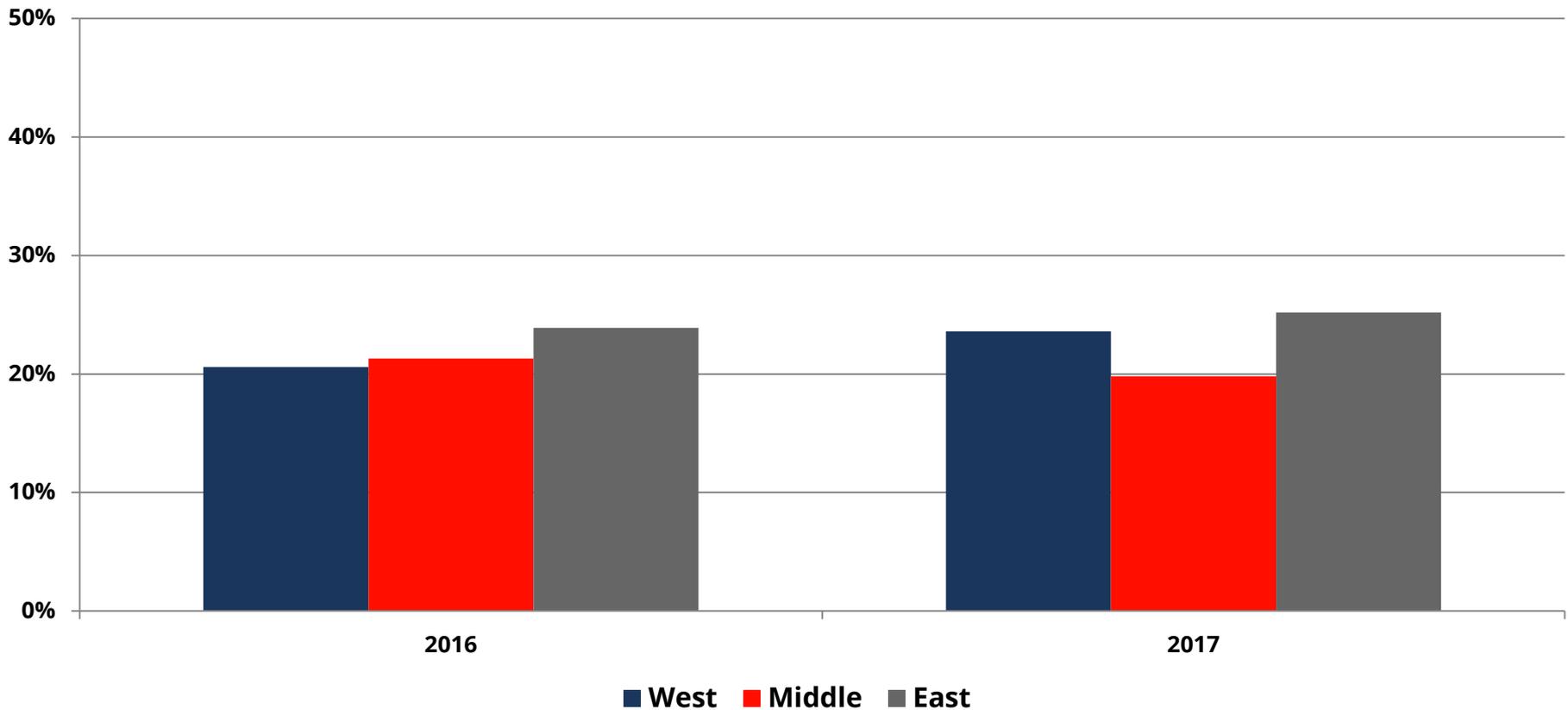
Tennessee BRFSS: Smoking

Smoking by Employment: TN BRFSS, 2011 to 2017



Tennessee BRFSS: Smoking

Smoking in Grand Divisions: TN BRFSS, 2016 to 2017

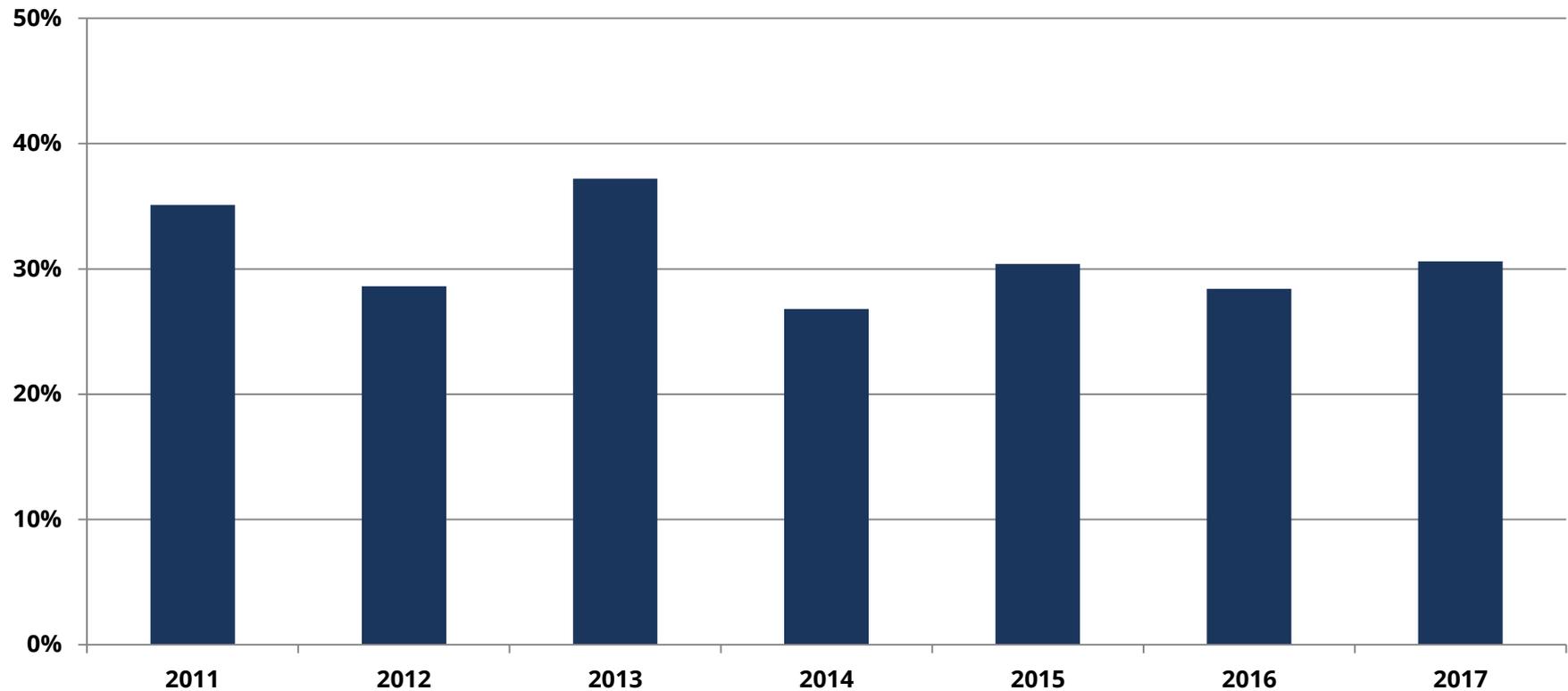


Tennessee BRFSS: Smoking Summary

- Almost 1 out of 4 adult Tennesseans reported being a current smoker.
- Men tend to have higher proportions of smokers than women.
- Tennesseans aged 65 years and older had the lowest proportions of smokers.
- Tennesseans who reported having fair or poor health had higher proportions of smokers than those with good health.
- Tennesseans with higher income and more education had lower proportions of smokers.
- Tennesseans unable to work had higher proportions of smokers than those who are employed or unemployed.
- Smoking was highest among Tennessee adults living in the East grand division, compared to Middle or West.

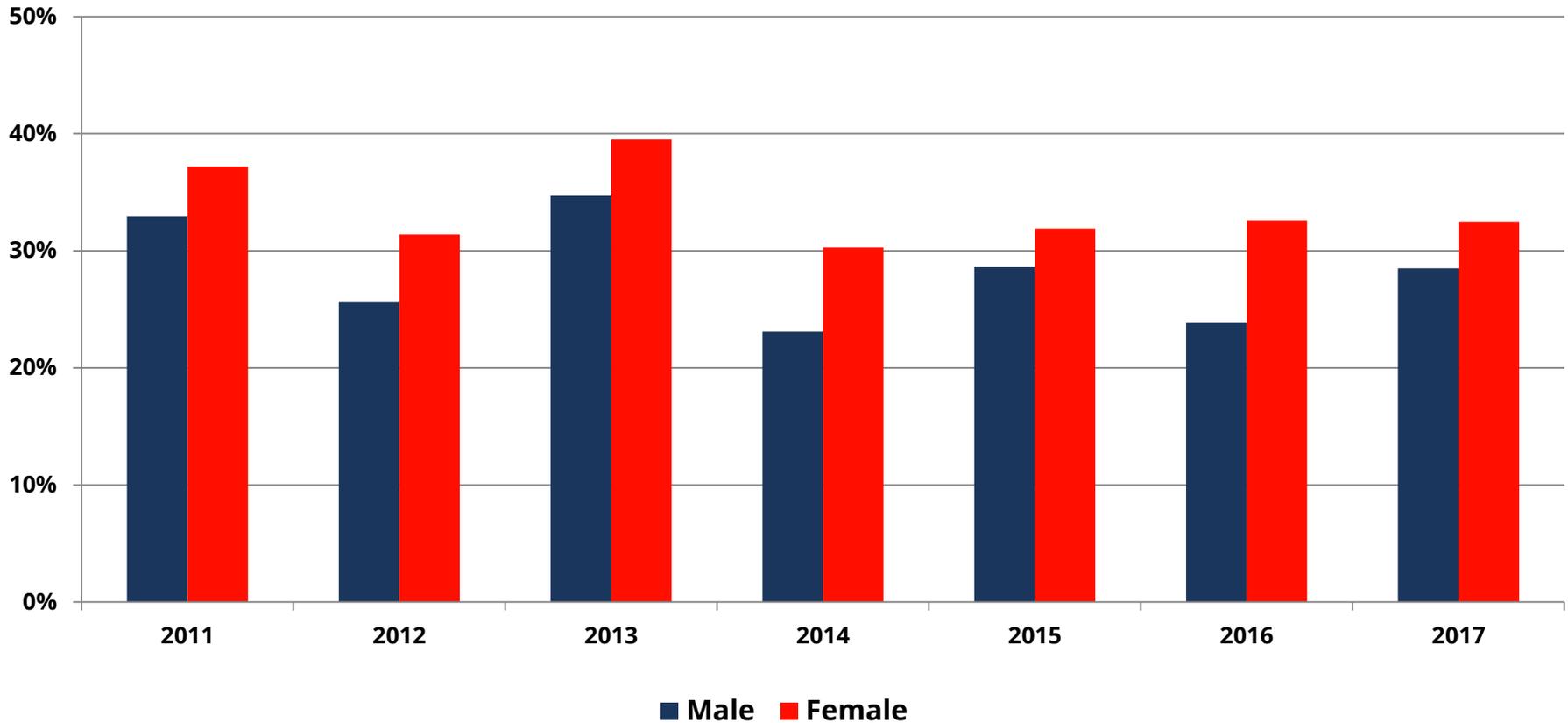
Tennessee BRFSS: Physical Inactivity

Physical Inactivity: TN BRFSS, 2011 to 2017



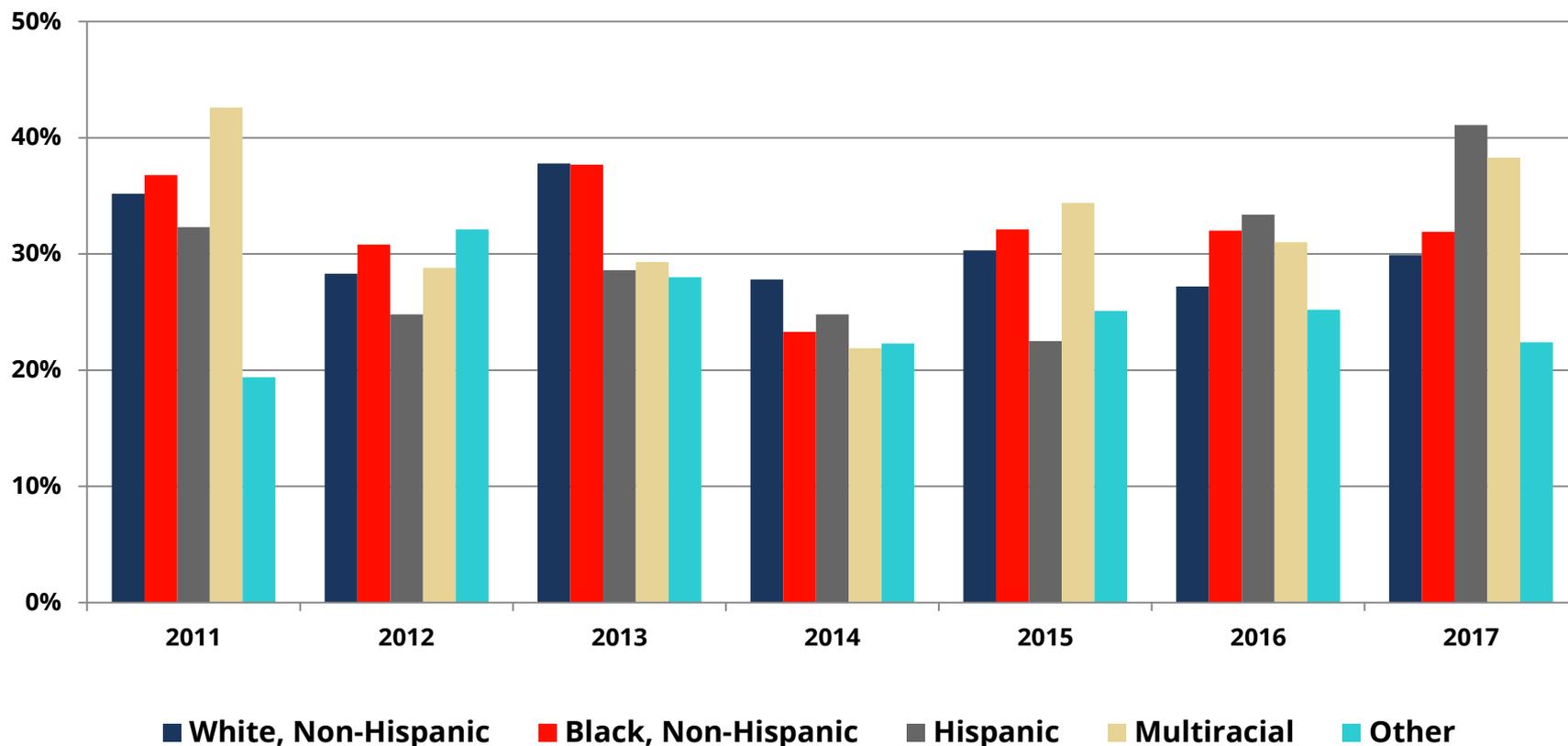
Tennessee BRFSS: Physical Inactivity

Physical Inactivity by Sex: TN BRFSS, 2011 to 2017



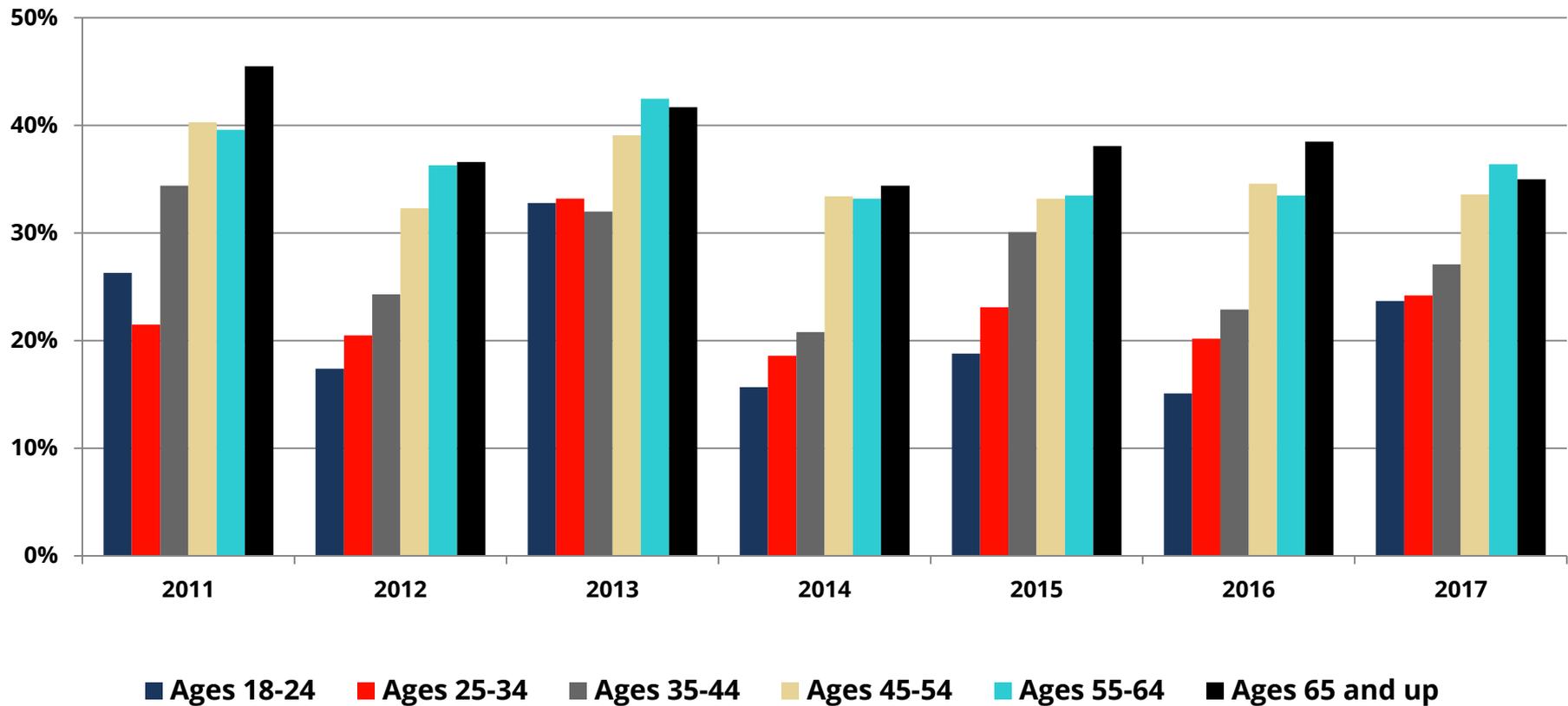
Tennessee BRFSS: Physical Inactivity

Physical Inactivity by Race: TN BRFSS, 2011 to 2017



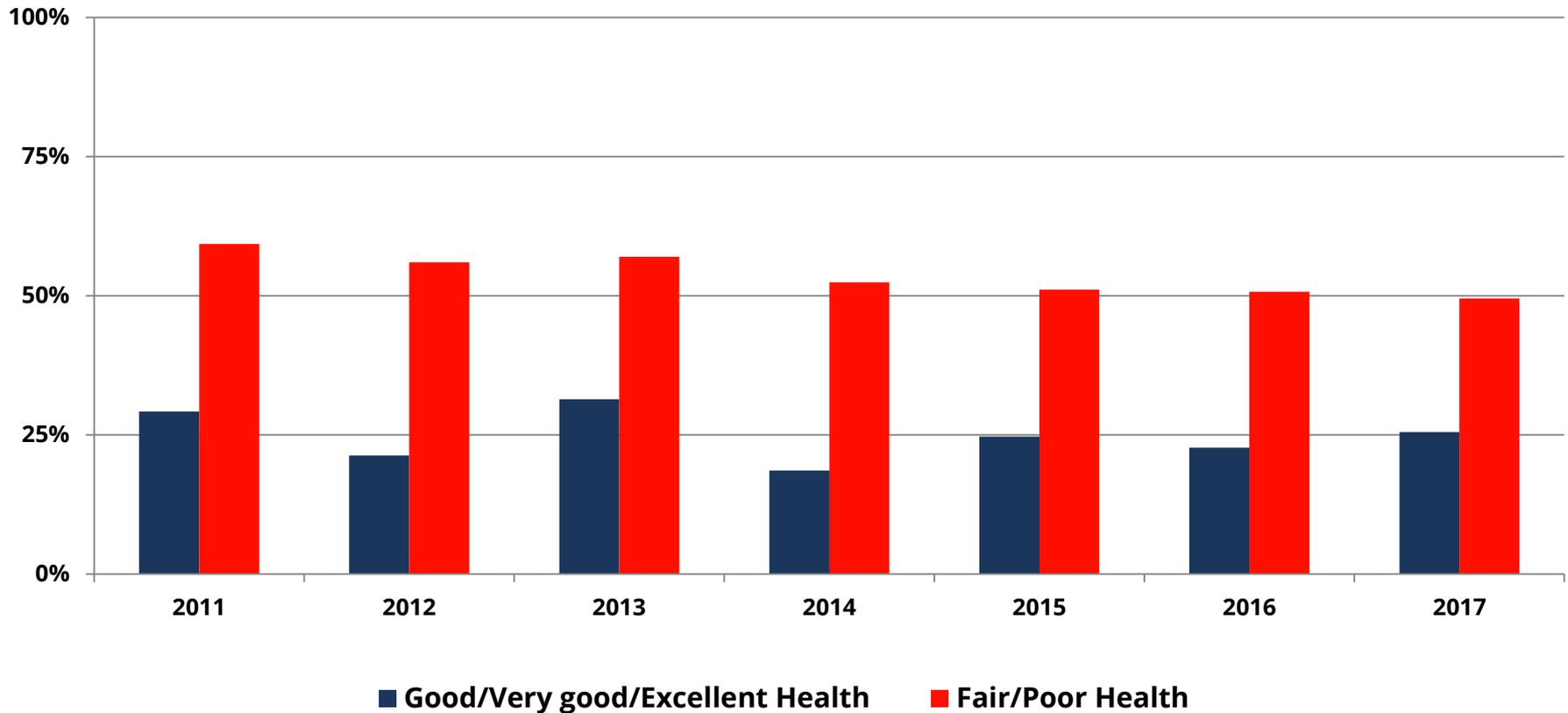
Tennessee BRFSS: Physical Inactivity

Physical Inactivity by Age Group: TN BRFSS, 2011 to 2017



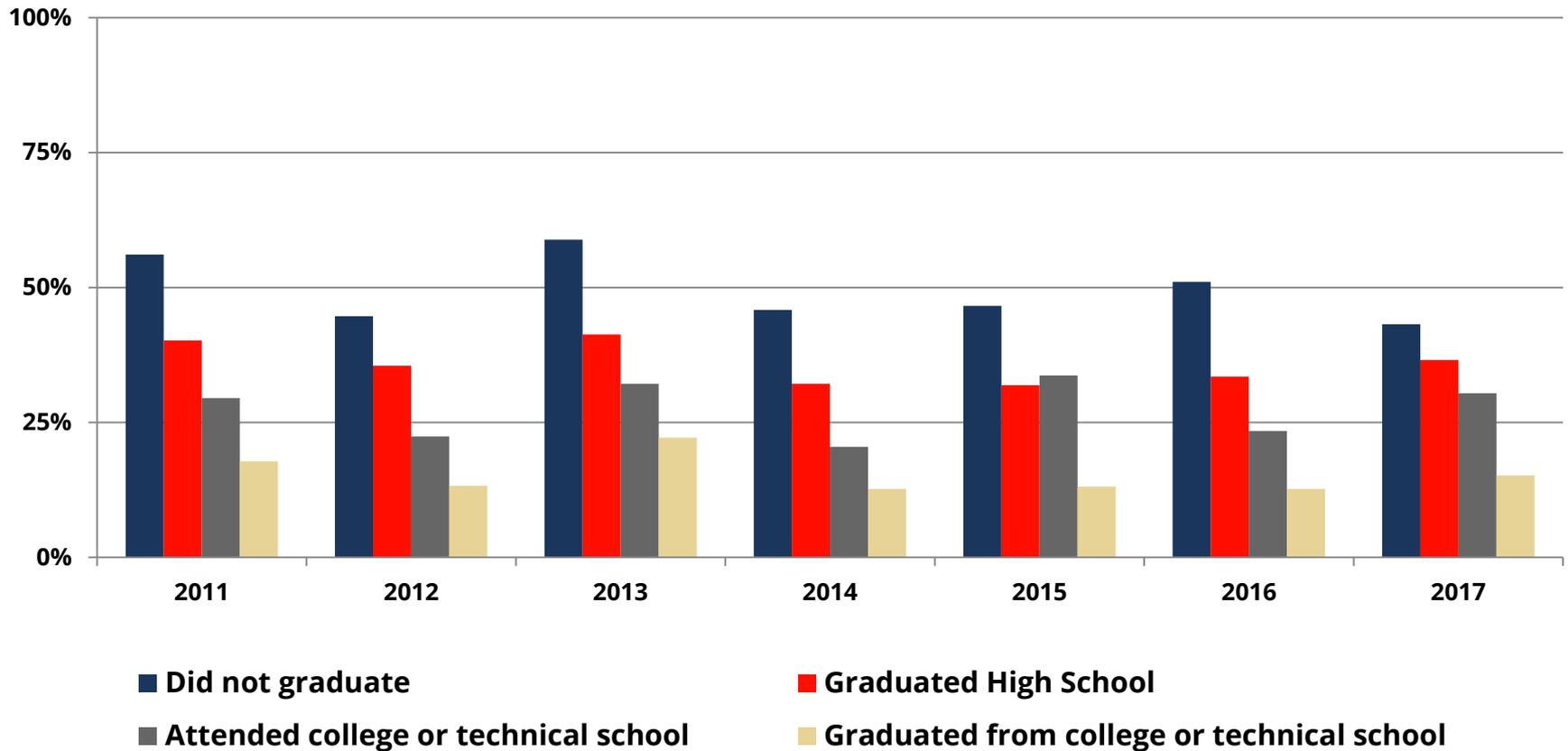
Tennessee BRFSS: Physical Inactivity

Physical Inactivity by Reported Health Status: TN BRFSS, 2011 to 2017



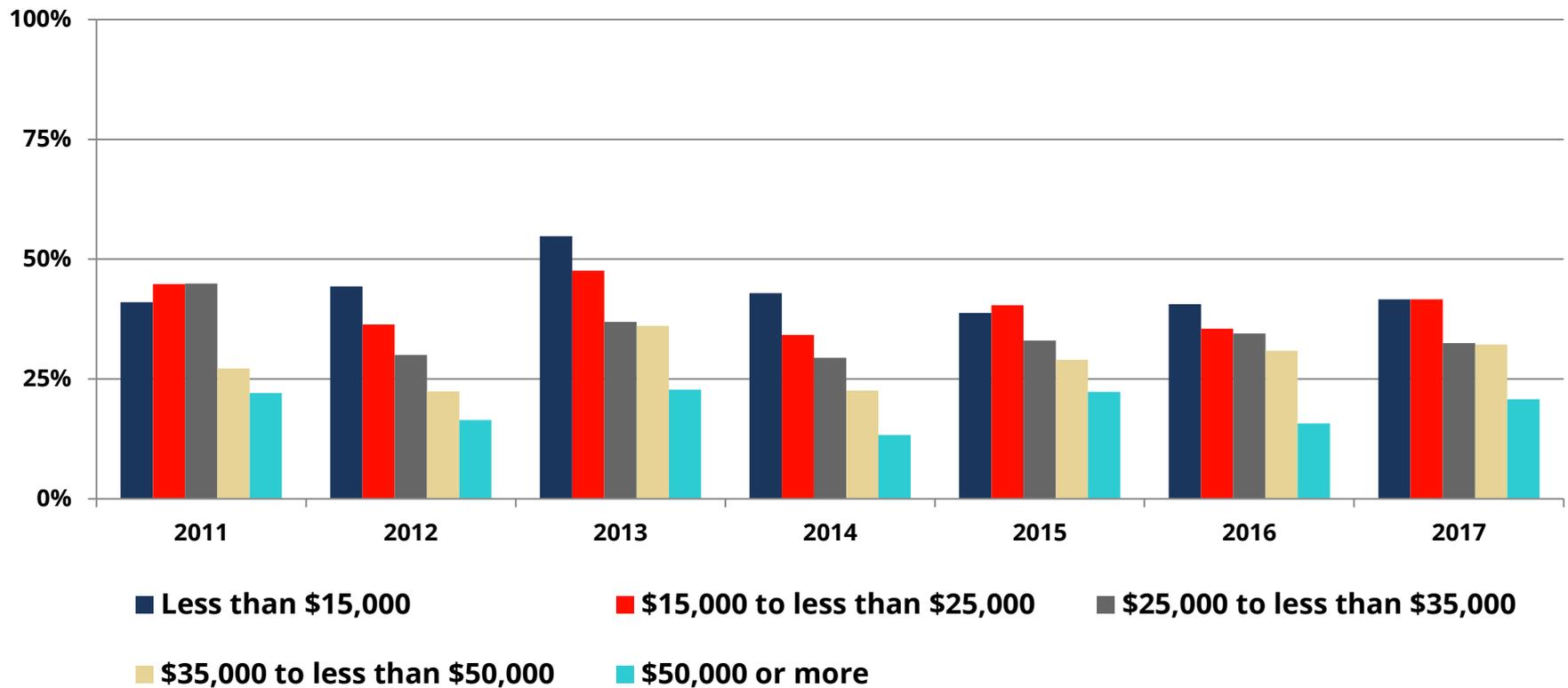
Tennessee BRFSS: Physical Inactivity

Physical Inactivity by Education: TN BRFSS, 2011 to 2017



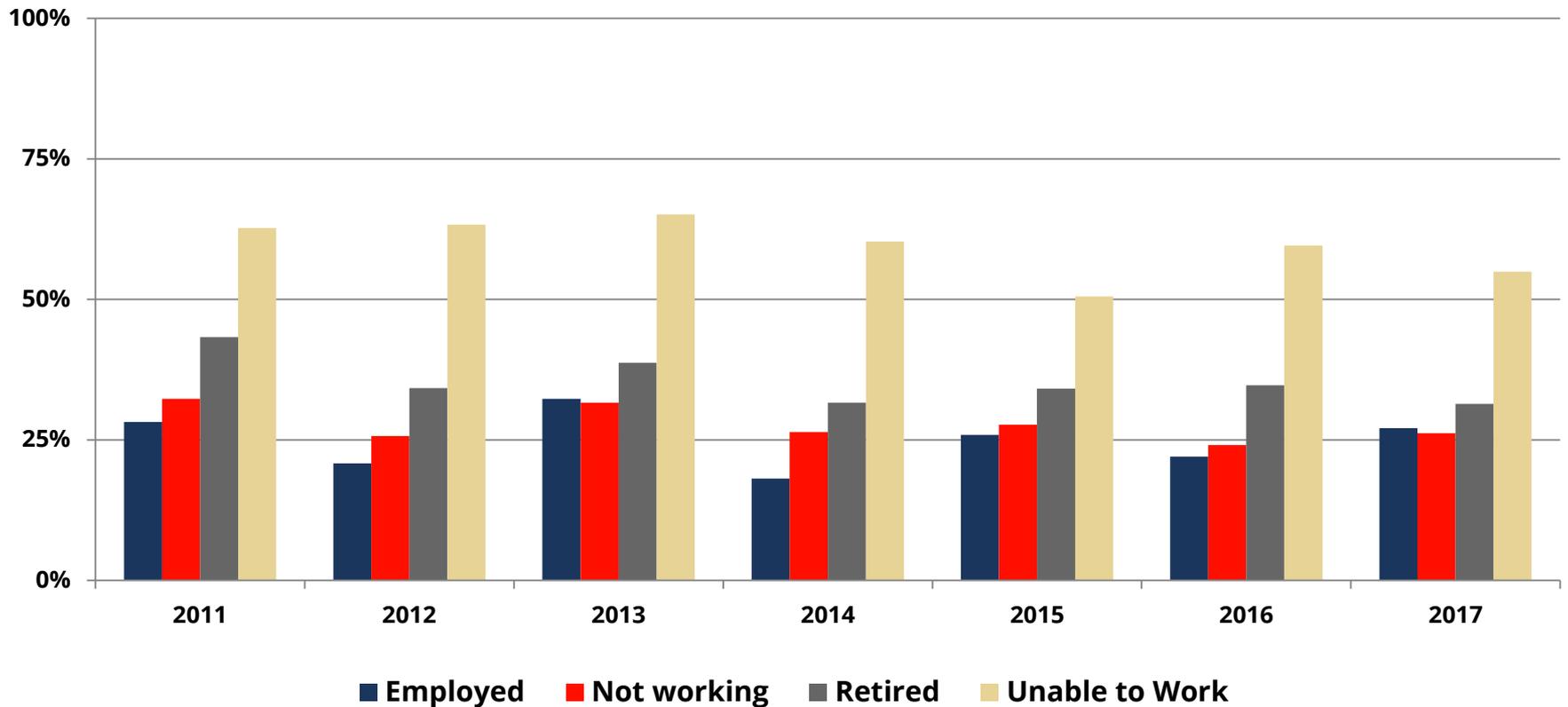
Tennessee BRFSS: Physical Inactivity

Physical Inactivity by Income: TN BRFSS, 2011 to 2017



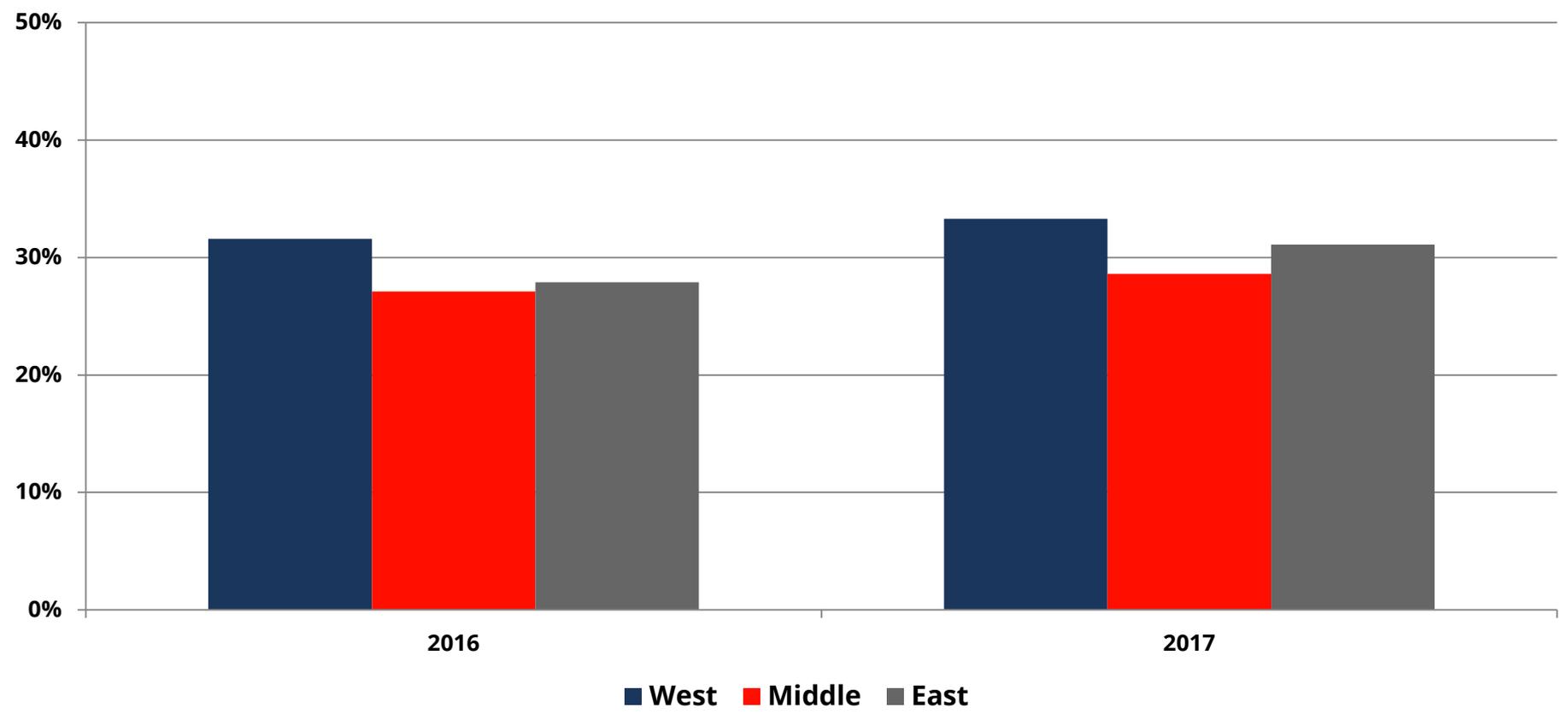
Tennessee BRFSS: Physical Inactivity

Physical Inactivity by Employment: TN BRFSS, 2011 to 2017



Tennessee BRFSS: Physical Inactivity

Physical Inactivity in Grand Divisions: TN BRFSS, 2016 to 2017

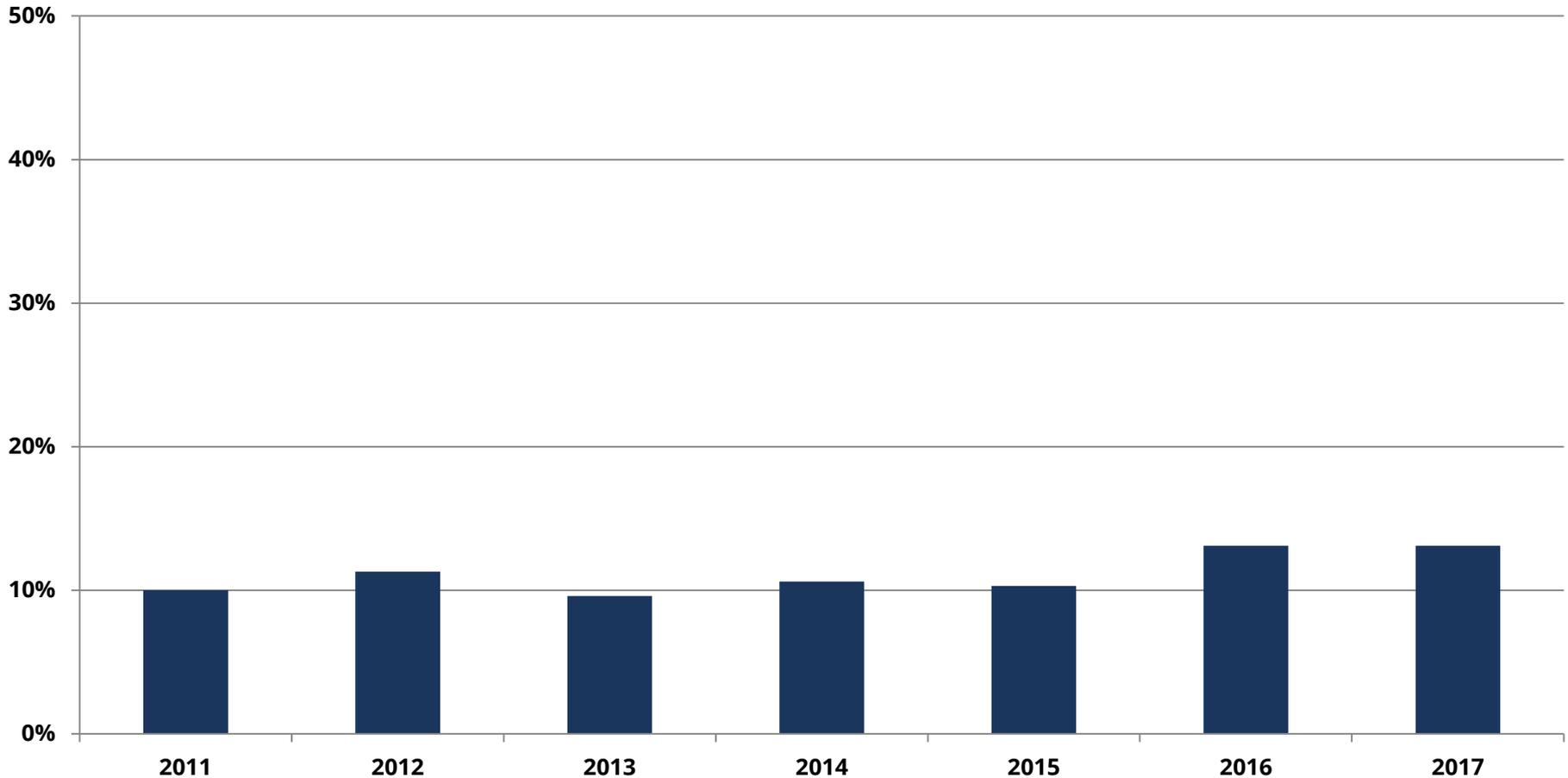


Tennessee BRFSS: Physical Inactivity Summary

- Around 1 in 3 adult Tennesseans reported not participating in physical activity.
- A higher proportion of women reported physical inactivity than men.
- Physical inactivity was more prevalent in older populations than younger populations.
- Tennesseans with fair or poor health had higher proportions of reported physical inactivity than those with good health.
- Tennesseans with higher income and more education had lower proportions of reported physical inactivity.
- Tennesseans unable to work had higher proportions of reported physical inactivity than those who are employed or unemployed.
- Physical inactivity was highest among adult Tennesseans living in the West grand division, compared to Middle or East.

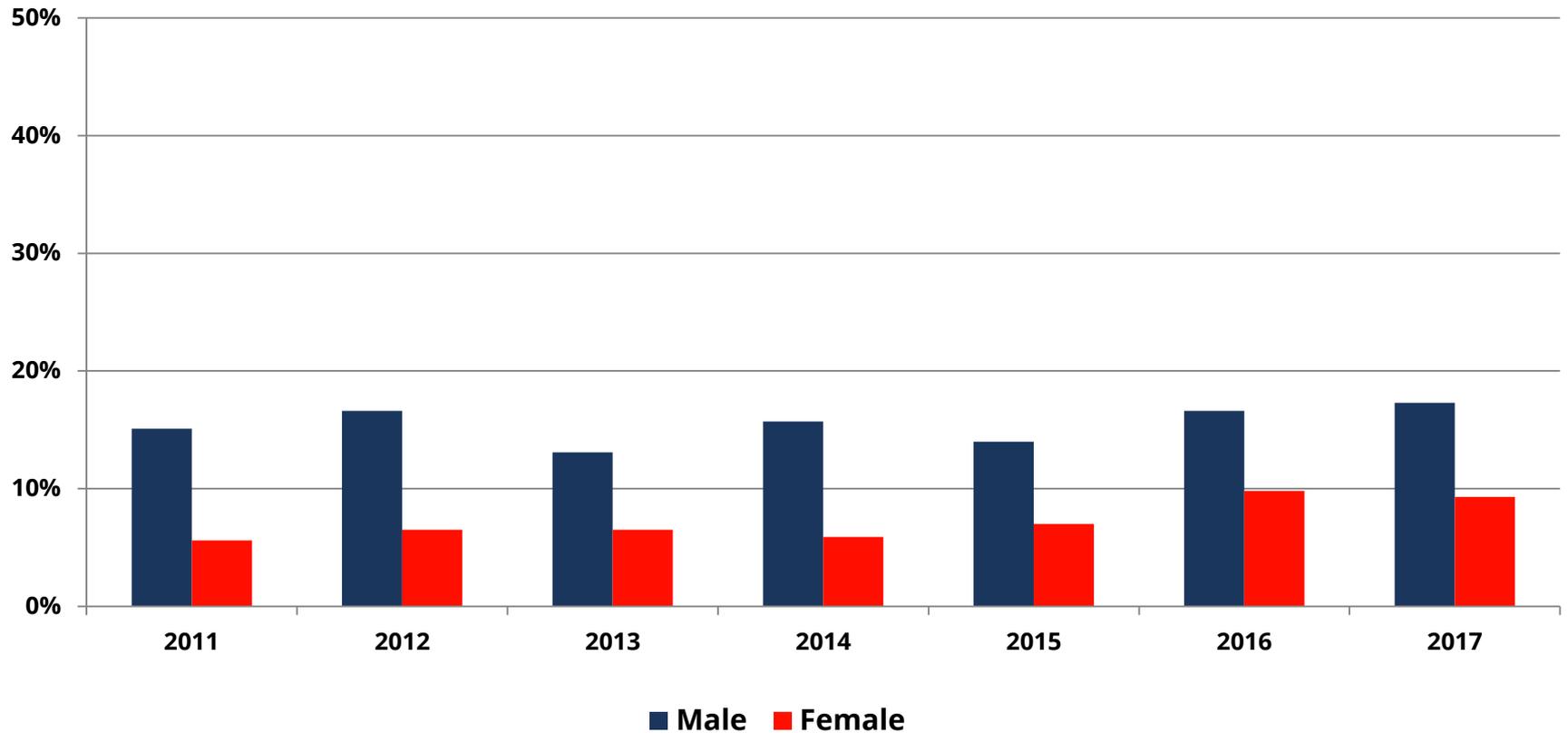
Tennessee BRFSS: Binge Drinking

Binge Drinking: TN BRFSS, 2011 to 2017



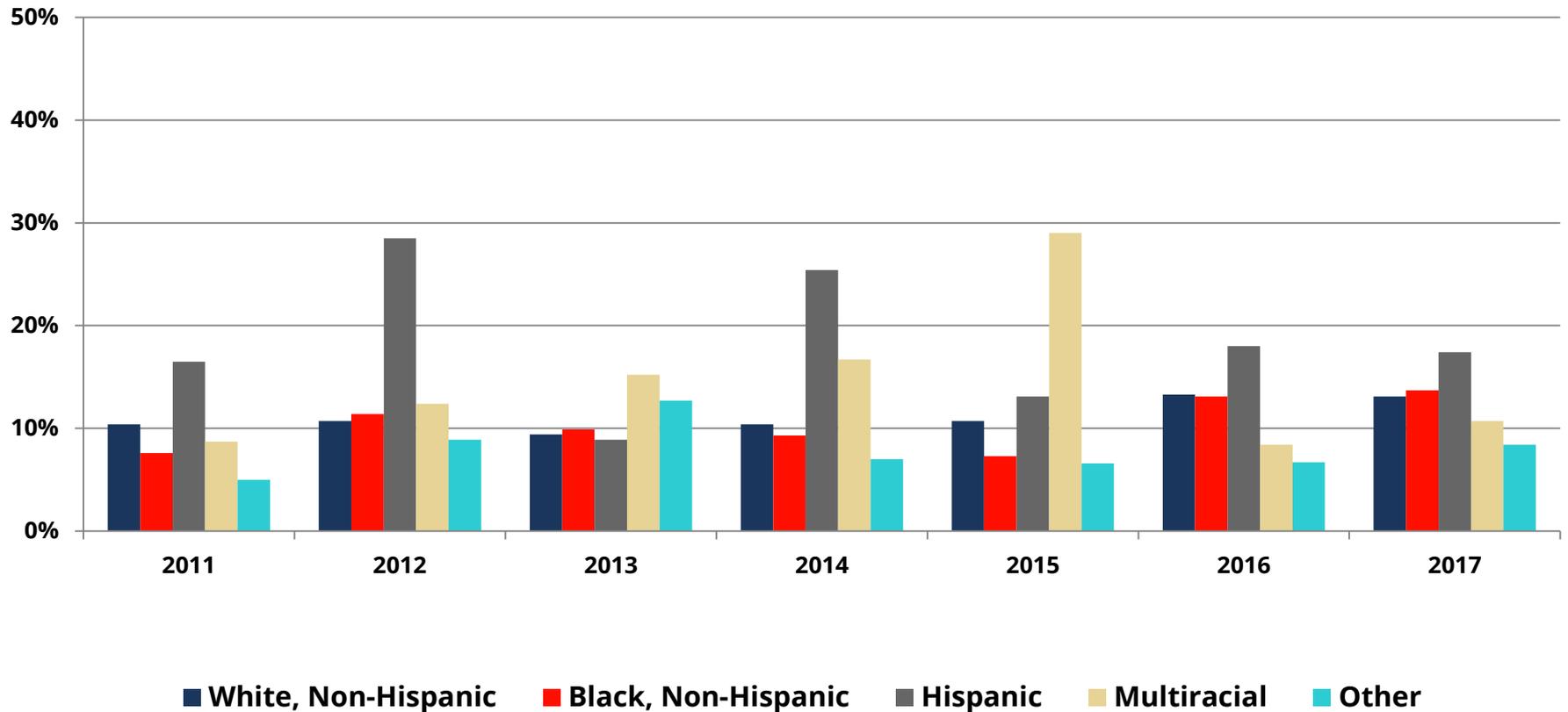
Tennessee BRFSS: Binge Drinking

Binge Drinking by Sex: TN BRFSS, 2011 to 2017



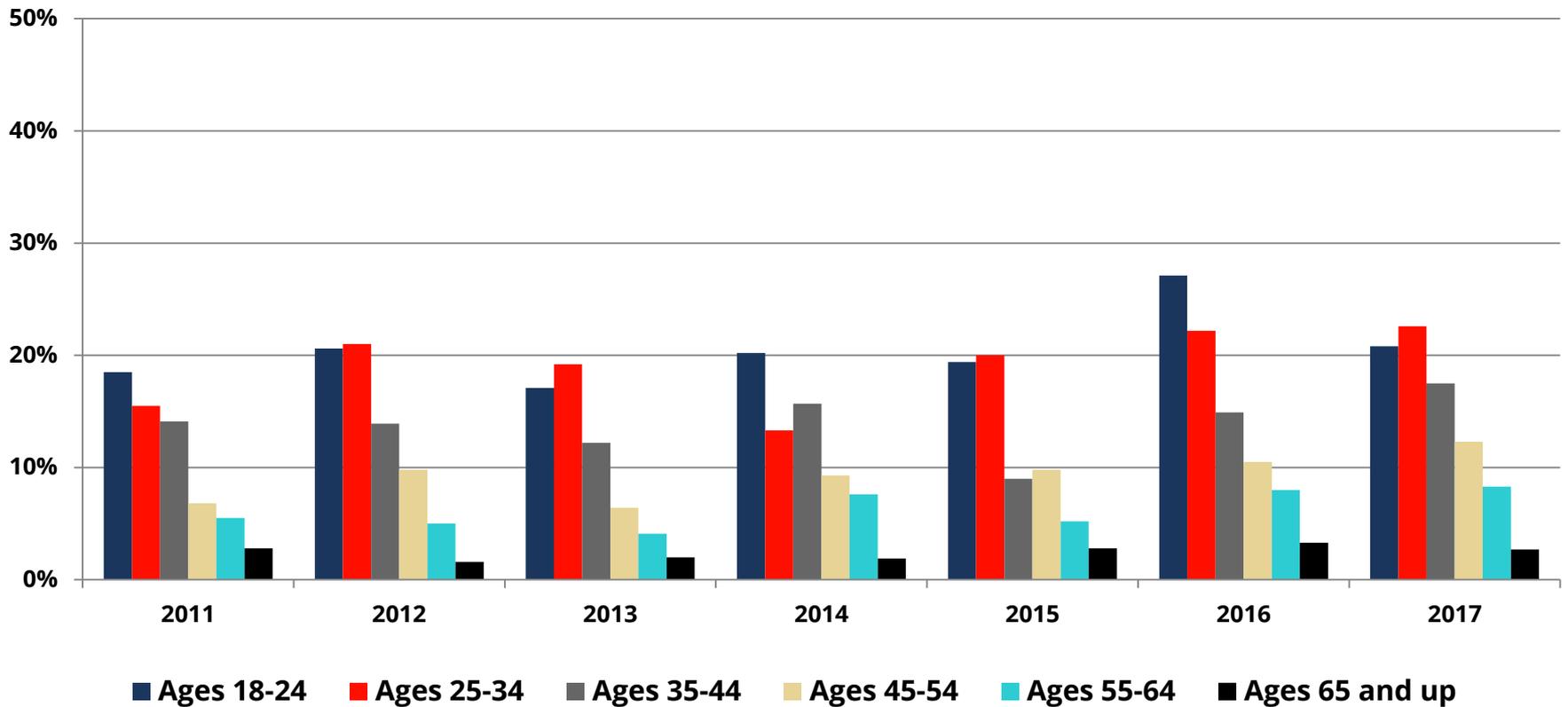
Tennessee BRFSS: Binge Drinking

Binge Drinking by Race: TN BRFSS, 2011 to 2017



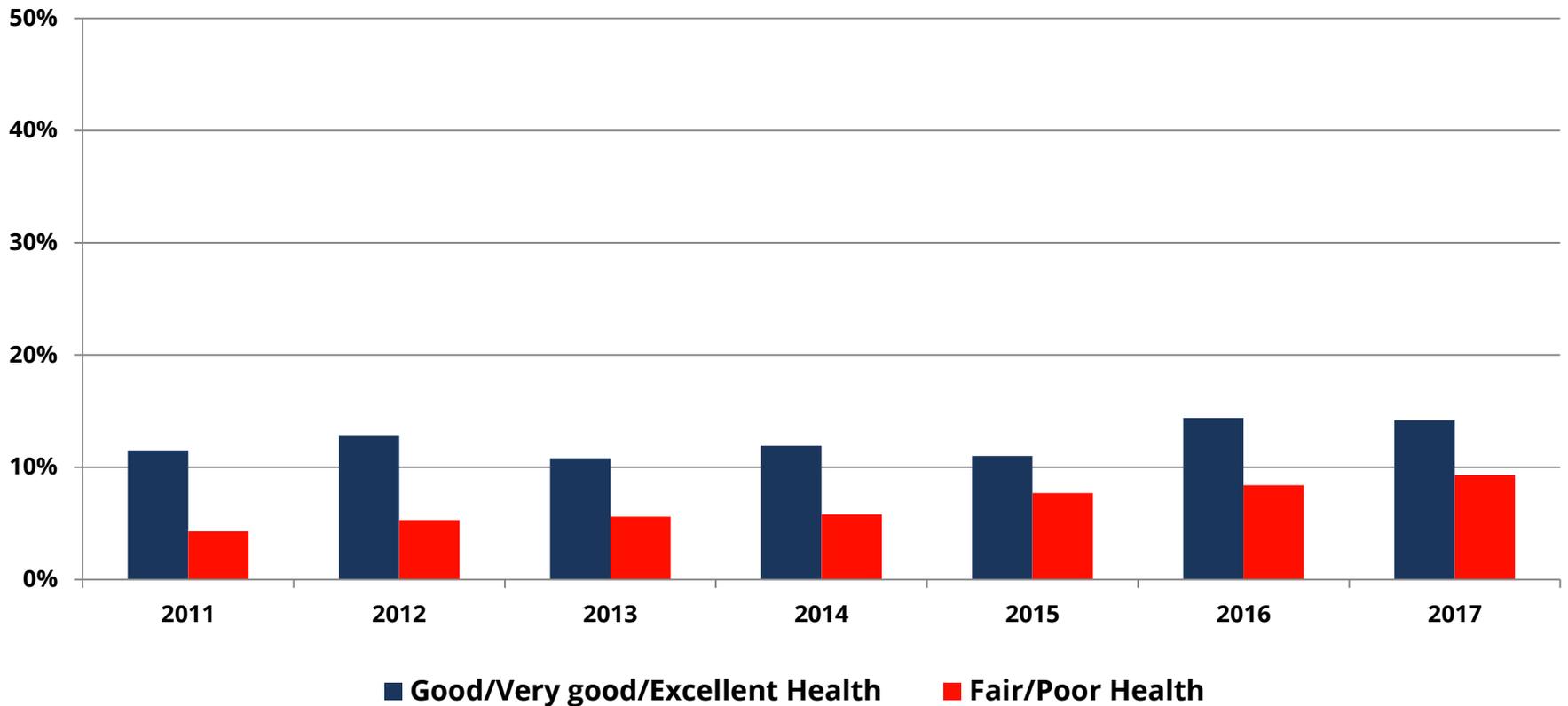
Tennessee BRFSS: Binge Drinking

Binge Drinking by Age Group: TN BRFSS, 2011 to 2017



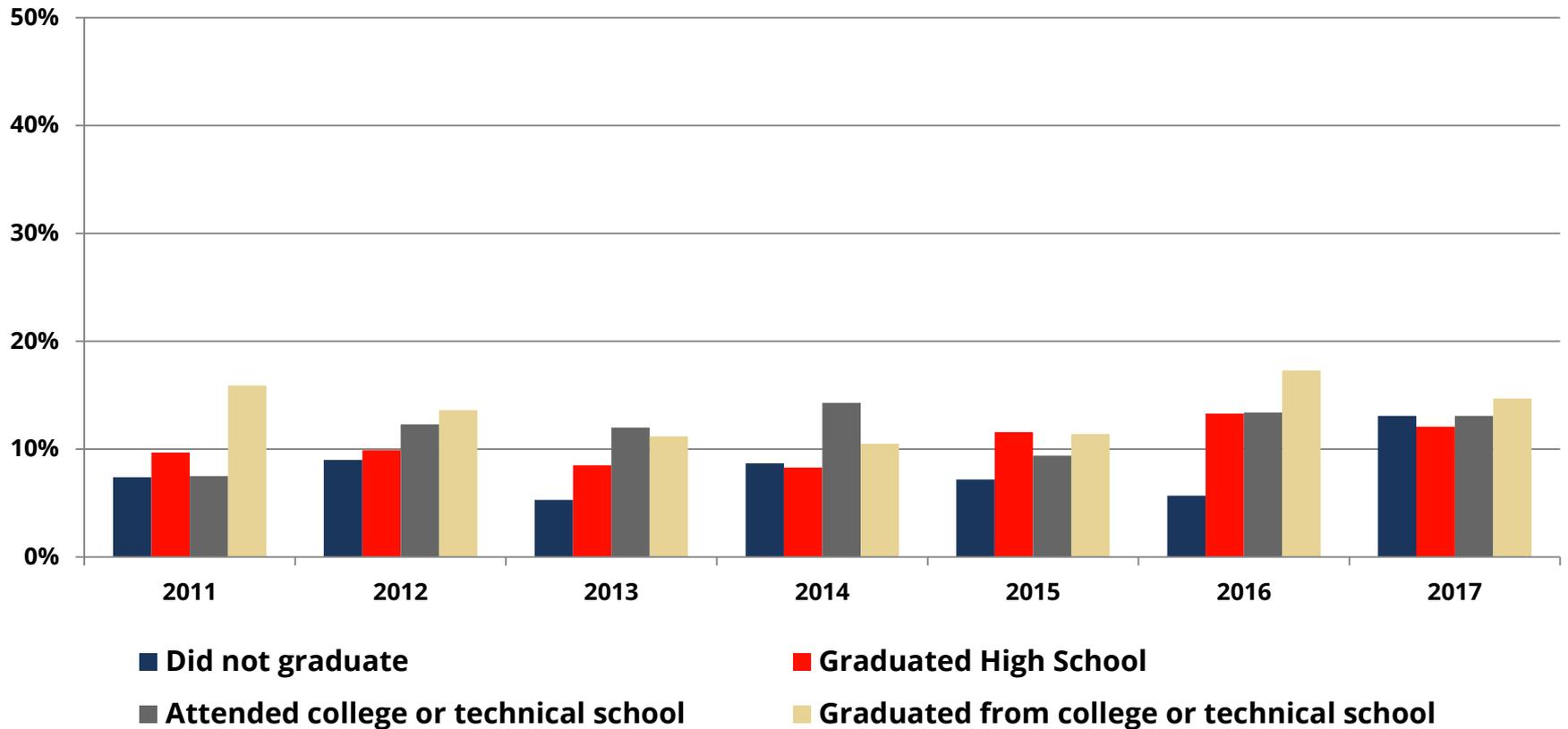
Tennessee BRFSS: Binge Drinking

Binge Drinking by Reported Health Status: TN BRFSS, 2011 to 2017



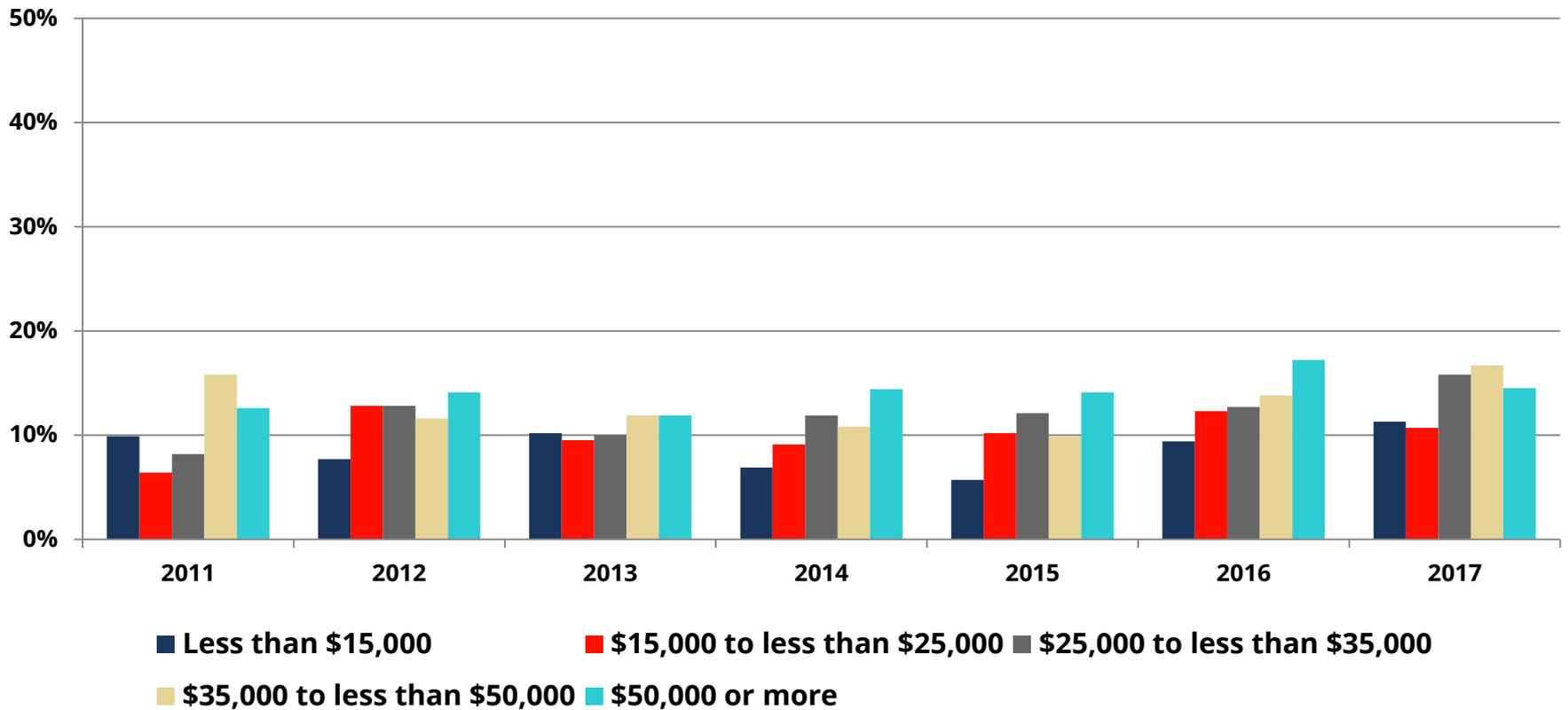
Tennessee BRFSS: Binge Drinking

Binge Drinking by Education: TN BRFSS, 2011 to 2017



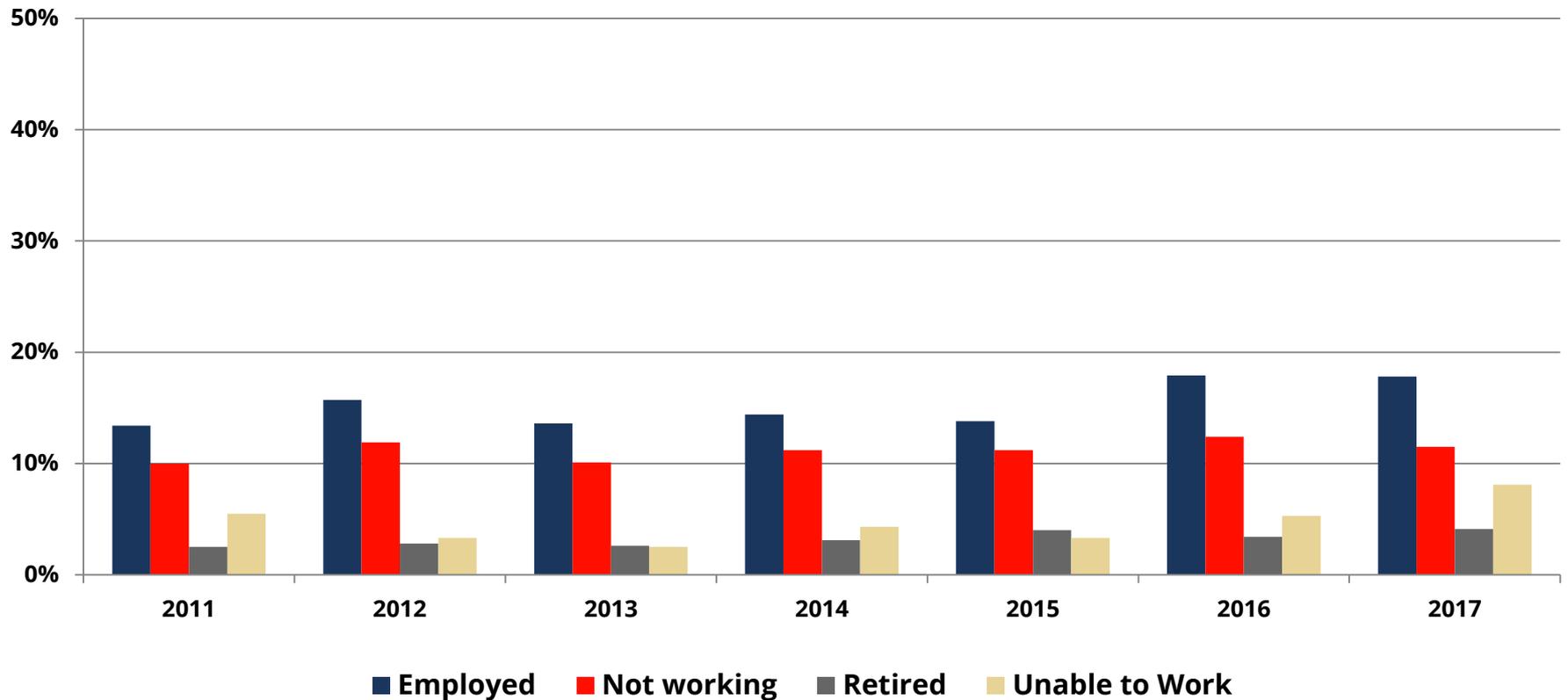
Tennessee BRFSS: Binge Drinking

Binge Drinking by Income: TN BRFSS, 2011 to 2017



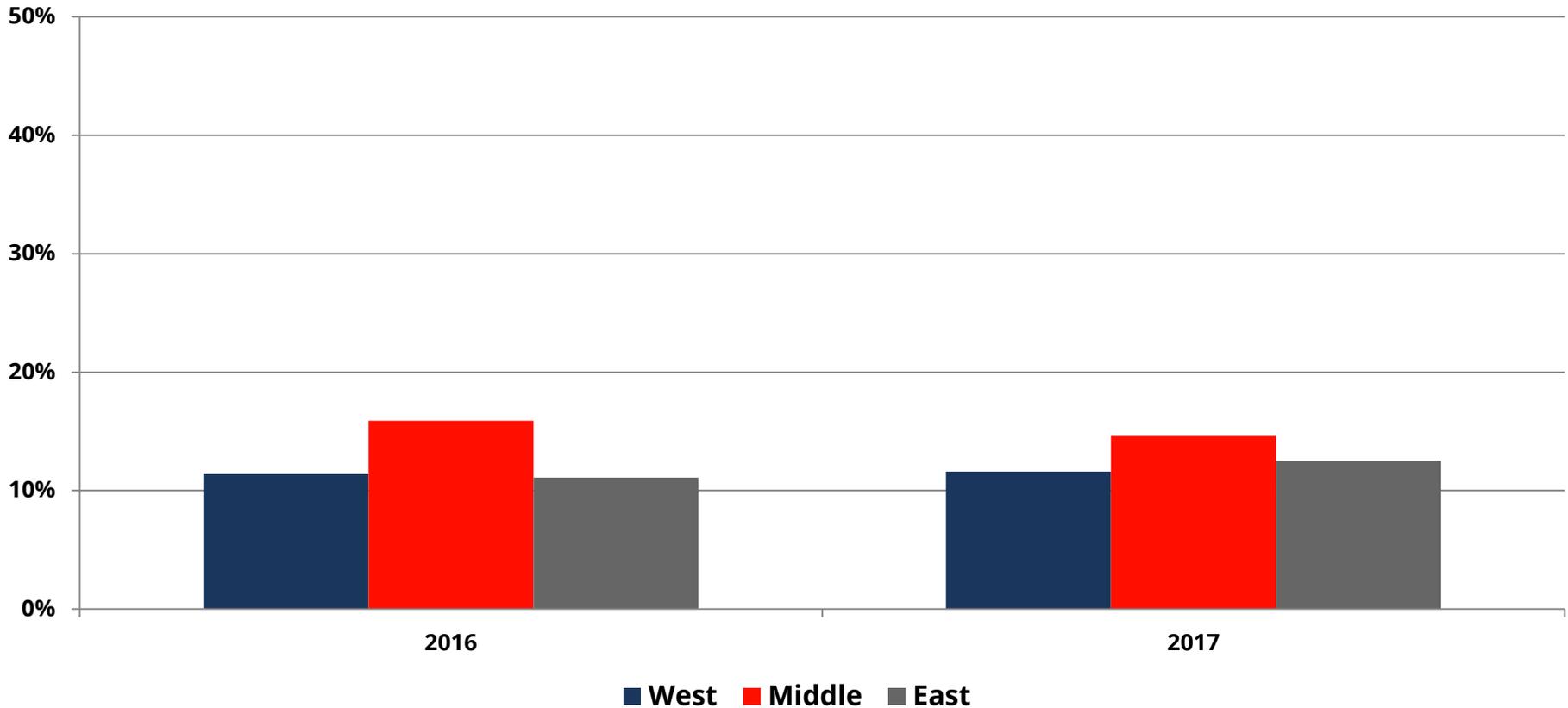
Tennessee BRFSS: Binge Drinking

Binge Drinking by Employment: TN BRFSS, 2011 to 2017



Tennessee BRFSS: Binge Drinking

Binge Drinking in Grand Divisions: TN BRFSS, 2016 to 2017

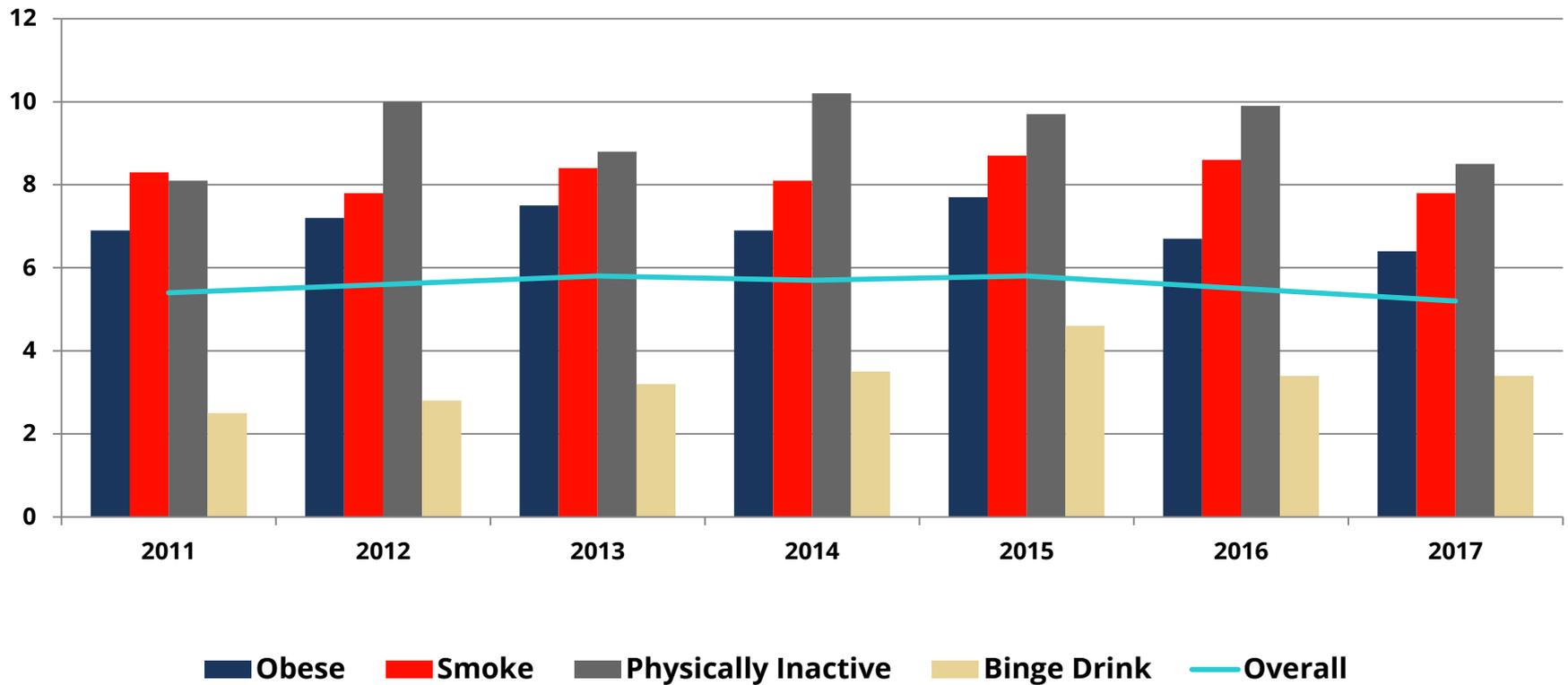


Tennessee BRFSS: Binge Drinking Summary

- About 1 out of 10 adult Tennesseans reported binge drinking.
- About twice as many men as women reported binge drinking.
- Older Tennesseans were much less likely to report binge drinking.
- Tennesseans with good, very good, or excellent health were more likely to report binge drinking than those with fair or poor health.
- Tennesseans with more education and higher incomes had slightly higher proportions of reported binge drinking.
- Tennesseans who were employed had the highest proportion of binge drinking.
- Binge drinking was highest among adult Tennesseans living in the Middle grand division, compared to West or East.
- Binge drinking associations were very different than the other 3 health behaviors because it is a very different behavior.

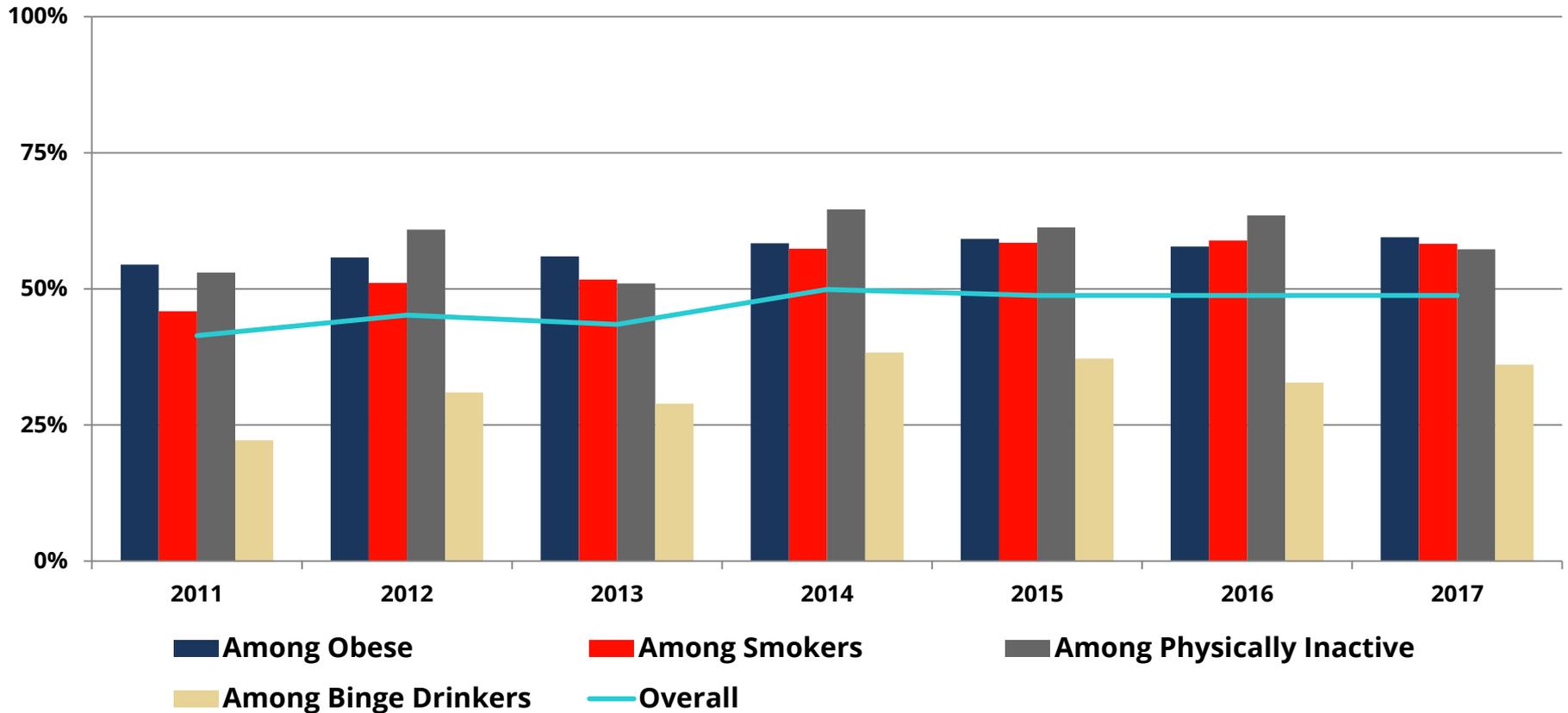
Tennessee BRFSS

Average days not feeling well per month: TN BRFSS, 2011 to 2017



Tennessee BRFSS

Reporting at least one Chronic Disease: TN BRFSS, 2011-2017



*Chronic Diseases includes Arthritis, Asthma, Myocardial Infarction, Stroke, Diabetes, Angina, Coronary Obstructive Pulmonary Disease

Data Requests

You may request raw data or an analysis of prevalence estimates from the Tennessee Department of Health via the Health Statistic's website's portal:

<https://www.surveygizmo.com/s3/1879037/DATA-REQUEST-FORM>

Acknowledgments

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Contact

Galen Conti, MPH | Epidemiologist and BRFSS Coordinator
Office of Population Health Surveillance
Division of Population Health Assessment
Andrew Johnson Tower, 2nd Floor
710 James Robertson Parkway, Nashville, TN 37243
p. 615-532-7890
tnbrfss.health@tn.gov